No. 16-1275

In the Supreme Court of the United States

VIRGINIA URANIUM, INC., et al.,

Petitioners,

v.

JOHN WARREN, et al.,

Respondents.

On Petition For A Writ Of Certiorari To The United States Court Of Appeals For The Fourth Circuit

SUPPLEMENTAL BRIEF FOR RESPONDENTS

MARK R. HERRING
Attorney General

STEPHEN A. COBB
Deputy Attorney General

PAUL KUGELMAN
Senior Assistant Attorney General

J. DUNCAN PITCHFORD
Assistant Attorney General

TOBY J. HEYTENS
Solicitor General
Counsel of Record

MATTHEW R. MCGUIRE
Deputy Solicitor General

OFFICE OF THE VIRGINIA ATTORNEY GENERAL
202 North Ninth Street
Richmond, VA 23219
(804) 786-7240
solicitorgeneral@oag.state.va.us

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COCKLE LEGAL BRIEFS (800) 225-6964
WWW.COCKLELEGALBRIEFS.COM

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IN THE
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SUPPLEMENTAL BRIEF FOR RESPONDENTS

The federal government argues that a 36-year-old Virginia policy that went unchallenged for 33 years might (or might not) be preempted by a federal statute that has been on the books for 54 years based on a construction of that statute given in a 35-year-old decision of this Court—a decision that, like all decisions of this Court interpreting that same federal statute, held that it did not preempt the allegedly usurped state law.

To be clear: This case does not involve whether the Commonwealth of Virginia may impose a moratorium on conventional uranium mining. The federal government acknowledges that it does not, has never, and indeed cannot regulate such mining. U.S. Br. 3, 13, 23. The federal government also admits that, notwithstanding the Atomic Energy Act (AEA), 42 U.S.C. §§ 2011 *et seq.*, States may regulate uranium mining, including by banning it altogether. U.S. Br. 18. Indeed,

the government even agrees that States may ban conventional uranium mining *based on concerns about the safety of the mining process itself*. See U.S. Br. 16 ("State regulation of conventional uranium mining is permissible if that regulation is grounded on concerns about mining itself, which is not subject to NRC regulation."); accord U.S. Br. 12-13, 18.

But even though States have plenary power over conventional uranium mining, the federal government argues that both lower courts erred—and the case should move forward—based on petitioners' allegations about the Virginia legislature's motives and a concession we have never made. As for the former, the government asserts that petitioners "have adequately alleged that . . . the Commonwealth has banned uranium mining not because of concerns about mining per se, but because of fears about radiological hazards associated with the next steps of the uranium-development process, which NRC regulates under the AEA." U.S. Br. 12. The government also suggests we "have conceded that, for purposes of [our] motion to dismiss," U.S. Br. 23, the courts should take as true petitioners' allegations that Virginia's moratorium was motivated "solely" by radiological safety concerns associated with milling and tailings. U.S. Br. 22. As a result, says the government, this Court "need not decide what evidence would be necessary or sufficient to prove those allegations" were the case to proceed beyond the motion-to-dismiss stage. U.S. Br. 23.

These arguments illustrate the weakness of the government's position and the untenable situation it

would create for States. They also highlight why this is a poor case for addressing the preemptive scope of the AEA. As this Court has explained in evaluating that very same statute, "inquiry into legislative motive"—itself always a potentially "unsatisfactory venture"—can be "particularly pointless" where (as here) there are no doubts about a State's ability to achieve a particular result and the only question is whether the State has relied on a proper justification for doing so. *Pacific Gas & Elec. Co.* v. *State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 216 (1983) (*Pacific Gas*). The problems will only be compounded if claims about what motivated a particular State's legislature to enact (or fail to repeal) a longstanding state policy are treated as allegations of fact that must be presumed true for purposes of a motion to dismiss. And the problems will only multiply if the list of state policies open to challenge is expanded to include not only those touching on matters regulated by the federal government but also state policies regulating activities that are, themselves, "subject to state rather than federal regulation." U.S. Br. 23.

Fortunately, there is no need for the Court to wade into those matters because there is no need for the Court to take this case. Both lower courts agreed about the proper outcome here, and their decisions upholding Virginia's three-decade-old moratorium on uranium mining do not conflict with either the decisions of this Court or another court of appeals. Nor does this petition for a writ of certiorari raise any issue of general importance. Despite vague expressions of concerns, see

U.S. Br. 22, the government identifies no tangible harms caused by Virginia's moratorium and no actual projects or activities that would be impeded were this Court simply to leave undisturbed the status quo that has prevailed since 1982. In short, "it is for Congress to rethink the division of regulatory authority in light of its possible exercise by the States to undercut a federal objective" and "[t]he courts should not assume the role which our system assigns to Congress." *Pacific Gas*, 461 U.S. at 223.

ARGUMENT

A. There is no conflict

The government suggests that the lower courts' resolution of this case conflicts with three others: this Court's decision in *Pacific Gas*; the Tenth Circuit's decision in *Skull Valley*;[1] and the Second Circuit's decision in *Entergy*.[2] U.S. Br. 19-21. But those cases are all distinguishable for the same basic reason: each arose directly out of activities that are themselves identified in the text of the AEA for regulation by the federal government. *Pacific Gas* involved the construction of new nuclear power plants. *Skull Valley* involved storage facilities for spent nuclear fuel. And *Entergy* involved rules governing existing nuclear power plants. This

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[1] *Skull Valley Band of Goshute Indians* v. *Nielson*, 376 F.3d 1223 (10th Cir. 2004), cert. denied, 546 U.S. 1060 (2005).

[2] *Entergy Nuclear Vt. Yankee, LLC* v. *Shumlin*, 733 F.3d 393 (2d Cir. 2013).

case, in contrast, involves conventional uranium mining—an entire category of activity that the federal government acknowledges remains "subject to state control." U.S. Br. 9; accord U.S. Br. 13, 16.

That distinction matters for reasons that are both textual and intensely practical. Textual because the clearest statutory basis for preemption based on the underlying "purpose" of a state regulation—42 U.S.C. § 2021(k)—is part of a broader provision whose entire function is to *expand* state regulatory authority by permitting States to regulate in areas that otherwise would be under exclusive federal control. Practical because all of the difficulties with—and disruptions threatened by—judicial inquiries into legislative motive would only be compounded by expanding their scope to include state regulation of "antecedent activit[ies]" (U.S. Br. 9) not otherwise under federal control. See *infra* Part B.

The claimed conflict with *Pacific Gas* also fails for another reason. Like the decision below—and like the two other decisions of this Court that followed it—*Pacific Gas* rejected a preemption claim and upheld the challenged state laws. 461 U.S. at 216; accord *English* v. *General Elec. Co.*, 496 U.S. 72, 90 (1990); *Silkwood* v. *Kerr-McGee Corp.*, 464 U.S. 238, 258 (1984). It is at least arguable that some of the language in *Pacific Gas* was "unnecessary to the Court's holding" and thus "dictum." *Pacific Gas*, 461 U.S. at 223-24 (Blackmun, J., concurring in part and concurring in the judgment). But regardless of how that question is answered, the fact remains that this Court has never invalidated a

state law based on the preemption theory urged here. For that reason, too, there is no "conflict[ ]" between the decision below and the "relevant decisions of this Court." S. Ct. R. 10(c).

B. This case is a poor vehicle for addressing preemption under the AEA

The government further errs in contending that "[t]his case presents a suitable vehicle to address the question presented." U.S. Br. 23. The linchpin of the government's vehicle analysis is its assertion that we "have conceded . . . for purposes of [our] motion to dismiss [that] the courts should take as true petitioners' allegation that the Virginia moratorium was motivated by radiological-safety concerns." U.S. Br. 23.

1. Because the point may prove critical were this Court to grant review, it is important to be clear about what we have and have not "conceded." Like any party who moves to dismiss for failure to state a claim, we "take all of the factual allegations in the complaint as true." *Ashcroft* v. *Iqbal*, 556 U.S. 662, 678 (2009). In various filings in this case, we also have assumed that "*one of the purposes* behind enacting [the moratorium] was to address potential radiological safety concerns." Resp't Mem. in Supp. of Mot. to Dismiss 15 (emphasis added; footnotes omitted).

That said, we have *never* conceded that legislative purpose is purely a question of fact (historical or otherwise). Nor have we conceded, even for purposes of the underlying motion to dismiss, that the Virginia

legislature's *sole* purpose in imposing a moratorium on conventional uranium mining was based on radiological safety concerns associated with uranium milling and tailings. See, *e.g.*, Reply in Supp. of Mot. to Dismiss & Resp. to Cross-Mot. for Summ. J. 8 n.9 (noting that "much of the evidence highlighted by the [petitioners] speaks not to radiation or radiological issues, but general concerns about health, safety and welfare").[3]

2. The government is similarly wrong in assuring the Court that it could simply assume that Virginia's law was wholly motivated by an allegedly improper purpose, while leaving for another day all thorny questions about "what evidence would be necessary or sufficient" to prove such allegations. U.S. Br.

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[3] The Fourth Circuit identified no basis for saying we "concede[d]" that the Commonwealth "lacks a non-safety rationale for banning uranium mining." Pet. App. 10a. Such a concession would be irrelevant in any event because the federal government acknowledges that Virginia may ban uranium mining based on safety concerns—even radiological safety concerns—so long as those concerns are grounded in the safety of the mining process rather than milling and tailings. See U.S. Br. 16.

As Judge Traxler noted in dissent, a footnote in our court of appeals' brief states—in response to a claim about what would happen if this case reached the summary judgment stage—that we have "conceded the truth of [petitioners'] claims about legislative motive only for purposes of their Rule 12(b)(6) motion." Resp. C.A. Br. 15 n.58 (cited in Pet. App. 29a n.9). Even if this statement could reasonably be construed as broader than others we have made about how Rule 12 operates—and it should not—this Court is not bound by "concessions" involving the proper operation of Rule 12(b)(6). See, *e.g.*, *Massachusetts* v. *United States*, 333 U.S. 611, 624 n.23 (1948) (explaining that this Court is "not bound to accept [a legal concession] as either sound or conclusive of the litigation. It is not, even in terms, a confession of error.").

23. For one thing, as explained above, respondents vigorously challenge the assumption that provides the predicate for those assurances.

But the government's assurances also are wrong because they attempt to skate over several difficult questions about how analysis of legislative purpose works in this context. For now, consider just two:

In this context, is legislative "purpose" a question of fact, a question of law, or a mixed question? In *Wyeth* v. *Levine*, 555 U.S. 555 (2009), for example, this Court analyzed Congress's purpose in a preemption case without giving any deference to (or even referencing) any trial court findings. *Id.* at 566-68, 573-81. In the voting rights context, however, this Court has treated legislative intent in drawing electoral districts as a factual question that is reviewed for clear error, and, as a result, state legislators often are deposed and forced to testify. See, *e.g.*, *Cooper* v. *Harris*, 137 S. Ct. 1455, 1466, 1473-75 (2017). The government's brief simply assumes that this context falls into the question-of-fact bucket. But none of this Court's previous decisions clearly answers that question.[4]

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[4] The government errs in describing *Pacific Gas* as "deferring to lower court's *factual* assessments" of the purpose of the challenged state law. U.S. Br. 15 (emphasis added). What this Court actually said was that its "general practice is to place considerable confidence in the *interpretations* of state law reached by *the federal courts of appeals*." *Pacific Gas*, 461 U.S. at 214 (emphasis added). Courts of appeals, of course, have no power to make factual findings.

Or take another question: What is the required relationship between an allegedly invalid purpose and any other purposes that may also have motivated the challenged state action? Does the challenger need to prove: (a) that the alleged improper purpose was the but-for cause of the legislative enactment, cf. *Hartman* v. *Moore*, 547 U.S. 250, 260 (2006); (b) that the improper purpose predominated over other valid purposes, cf. *Easley* v. *Cromartie*, 532 U.S. 234, 241 (2001); (c) that there is no rational purpose for the law other than the improper purpose, cf. *Nordlinger* v. *Hahn*, 505 U.S. 1, 6 (1992); or (d) something else? None of the Court's previous decisions in this area squarely address that question—though *Pacific Gas* says that where (as here) it is clear that Congress did not displace the States' traditional authority to reach a given outcome (here, a moratorium on conventional uranium mining) "it should be up to Congress to determine whether a State has misused the authority left in its hands." *Pacific Gas*, 461 U.S. at 216.

In our view, the better answers are that this type of inquiry is more akin to a legal question than a factual one and that the relevant materials show that the Virginia legislature had a variety of concerns in mind when enacting the moratorium. Pet. App. 178a, 182a-88a. The government's question-of-fact position ignores the profound difficulties posed by attempting to discover facts underlying a nearly 40-year-old enactment by a state legislature that maintains a paucity of legislative history. Even more troublingly, the question-of-fact view could create the untenable situation

where district courts reach different conclusions about whether a given state law is preempted and those differing conclusions are then subject to clear-error review on appeal. Cf. *U.S. Bank N.A.* v. *Vill. at Lakeridge, LLC*, No. 15-1509, slip op. at 8 (Mar. 5, 2018) ("[W]hen applying the law involves developing auxiliary legal principles of use in other cases[,] appellate courts should typically review a decision *de novo*."). But regardless of whether this Court agrees with our assessment, those are the types of questions that would need to be answered before petitioners could be granted any relief.

3. It also is worth noting the breadth of the federal government's position. In its view, a preemption challenge to a state law regulating an activity committed entirely to the States' control could survive a motion to dismiss as long as the plaintiff alleges an improper legislative motive for passing an otherwise facially valid law. Such a rule would permit virtually any preemption challenge to advance to discovery, subjecting the State and its officials to potentially intrusive inquiries about what motivated a state legislature to adopt a law regulating activities that are themselves entirely unregulated by the federal government. But "[t]he allocation of powers in our federal system preserves the integrity, dignity, and residual sovereignty of the States," *Bond* v. *United States*, 564 U.S. 211, 221 (2011), and the federal government offers nothing but speculation to justify why such an intrusion in state sovereignty is necessary. This is especially true given that Congress retains ample authority "to rethink the

division of regulatory authority" if it disagrees with Virginia's longstanding policies about conventional uranium mining. *Pacific Gas*, 461 U.S. at 223.[5]

C. This case raises no issue of general or urgent importance

It bears repeating that Virginia's moratorium on conventional uranium mining has been in place since President Reagan's first term and went completely unchallenged until the end of the second Obama Administration. At worst, that sort of delay could give rise to a defense of laches or the like. But even at best, it badly undermines any claim about the urgency of this issue.

The federal government has not identified any pressing need for this Court's intervention. The government makes no claim that the actual policy at issue in this case—Virginia's moratorium on conventional uranium mining—is, has, or can be expected to cause any harm whatsoever to the national interest. Tellingly, the government offers no support to petitioners' overheated claims of dire harm to "our economy [and]

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[5] As we pointed out to both courts below, Congress undertook a substantial revision of the AEA early this century with the passage of the 2005 Energy Policy Act without disturbing the uranium mining moratorium in Virginia or any other State. See, *e.g.*, Resp't Mem. in Supp. of Mot. to Dismiss 11. This too undermines the federal government's implicit contention that the "clear and manifest purpose of Congress" was to displace Virginia's exercise of its sovereign police power. *Pacific Gas*, 461 U.S. at 206.

national security." Compare Pet. Cert. Reply 10-12, with U.S. Br. 22.[6]

The government vaguely suggests that the question presented here is "likely to recur in other nuclear-safety contexts," U.S. Br. 9, and that "the Fourth Circuit's analysis" *might* permit other States to take other steps that *might* be harmful to federal interests. U.S. Br. 22. But the government fails to identify any concrete state policies that have been enacted—or even general proposals that have been made—during the 14 months since the Fourth Circuit's decision in this case or the 28 months since the district court's decision. Better to let sleeping dogs lie.

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[6] Nor could it, given the Nuclear Regulatory Commission's plenary power to conduct mining operations to meet national security needs. See 42 U.S.C. § 2096.

CONCLUSION

The petition for a writ of certiorari should be denied.

Respectfully submitted,

MARK R. HERRING
Attorney General

STEPHEN A. COBB
Deputy Attorney General

PAUL KUGELMAN
Senior Assistant Attorney General

J. DUNCAN PITCHFORD
Assistant Attorney General

TOBY J. HEYTENS
Solicitor General
Counsel of Record

MATTHEW R. MCGUIRE
Deputy Solicitor General

OFFICE OF THE VIRGINIA ATTORNEY GENERAL
202 North Ninth Street
Richmond, VA 23219
(804) 786-7240
solicitorgeneral@oag.state.va.us

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NOEL J. FRANCISCO
Solicitor General
Counsel of Record
JEFFREY H. WOOD
Acting Assistant Attorney General
MALCOLM L. STEWART
Deputy Solicitor General
ANN O'CONNELL
Assistant to the Solicitor General
VARU CHILAKAMARRI
Attorney
Department of Justice
Washington, D.C. 20530-0001
SupremeCtBriefs@usdoj.gov
(202) 514-2217

ANDREW P. AVERBACH
Solicitor
CHARLES E. MULLINS
JEREMY M. SUTTENBERG
Attorneys
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

QUESTION PRESENTED

Whether the Atomic Energy Act of 1954 (AEA), 42 U.S.C. 2011 *et seq.*, preempts state laws that prohibit activities within a State's regulatory jurisdiction (here, conventional uranium mining) when such laws are grounded in radiological-safety concerns about related activities that are federally regulated under the AEA (here, the milling of uranium ore and disposal of "tailings" byproduct).

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BRIEF FOR THE UNITED STATES AS AMICUS CURIAE SUPPORTING PETITIONERS

INTEREST OF THE UNITED STATES

This case concerns whether the Atomic Energy Act of 1954 (AEA), 42 U.S.C. 2011 *et seq.*, preempts a state law that prohibits an activity within a State's regulatory jurisdiction, when such a law is motivated by radiological-safety concerns about related activities that are federally regulated under the AEA. Because this case directly implicates federal regulatory responsibilities, the United States has a substantial interest in the Court's resolution of the preemption issue. At the Court's invitation, the United States filed an amicus brief at the petition stage of this case.

STATEMENT

A. Regulatory Background

1. In 1946, Congress created a federal-government monopoly over the production, ownership, and use of "fissionable material," including enriched uranium and

other materials that are "capable of releasing substantial quantities of energy through nuclear chain reaction." Atomic Energy Act of 1946 (1946 Act), ch. 724, §§ 1(b)(4), 5(a)(1), 60 Stat. 756, 760. To implement this federal monopoly, Congress restricted the transfer, delivery, and receipt of nuclear "source materials" like uranium. § 5(b)(1) and (2), 60 Stat. 761.

In 1954, through the AEA, 42 U.S.C. 2011 *et seq.*, Congress eliminated the federal government's monopoly over the "use, control, and ownership of nuclear technology," *Pacific Gas & Elec. Co.* v. *State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 206 (1983) (*Pacific Gas*), in order "to encourage widespread participation in the development and utilization of atomic energy for peaceful purposes to the maximum extent consistent with the common defense and security and with the health and safety of the public," 42 U.S.C. 2013(d). The AEA preserves the States' authority to regulate "with respect to the generation, sale, or transmission of electric power produced through the use of nuclear facilities licensed by the [NRC]." 42 U.S.C. 2018; see Act of Aug. 30, 1954 (1954 Act), ch. 1073, § 1, 68 Stat. 921. In 1965, Congress clarified that the AEA's preservation of state regulatory authority "shall not be deemed to confer upon any Federal, State, or local agency any authority to regulate, control, or restrict any activities of the [NRC]." 42 U.S.C. 2018; see Act of Aug. 24, 1965, Pub. L. No. 89-135, 79 Stat. 551.

In order to promote private-sector development of nuclear energy, subject to strict federal control, Congress has fashioned a comprehensive scheme for the regulation and development of nuclear energy. *Pacific Gas*, 461 U.S. at 193; see *Duke Power Co.* v. *Carolina*

Envtl. Study Grp., Inc., 438 U.S. 59, 63 (1978). Responsibility for implementing the AEA is currently shared among the Nuclear Regulatory Commission (NRC), which serves as the principal licensing and safety regulator, see 42 U.S.C. 5841-5845; the U.S. Department of Energy (DOE), which oversees federal research and promotional activities, see 42 U.S.C. 5811-5813, 7151(a); and the Environmental Protection Agency (EPA), which establishes generally applicable standards for certain radiation hazards, see, *e.g.*, 42 U.S.C. 2022.[1]

Among other responsibilities, NRC licenses and regulates the transfer, possession, use, and disposal of nuclear materials throughout the nuclear fuel cycle, as needed to "promote the common defense and security" and to "protect health or to minimize danger to life or property." 42 U.S.C. 2201(b). "[S]ource material," including uranium, is regulated upon removal from its place of deposit in nature. 42 U.S.C. 2092; see 42 U.S.C. 2014(z) (defining "'source material'" to include "uranium"); 10 C.F.R. 40.4 (same). "[N]o person may transfer or receive in interstate commerce * * * any source material after removal from its place of deposit in nature" unless such actions are "authorized by a general or specific license issued by [NRC]." 42 U.S.C. 2092; see 42 U.S.C. 2093, 2099; 10 C.F.R. Pt. 40 (implementing regulations).

The AEA requires similar licenses for the transfer or possession of "'special nuclear material,'" which includes uranium that has been "enriched in the isotope 233 or in the isotope 235." 42 U.S.C. 2014(aa); see 42 U.S.C. 2073-2074 (2012 & Supp. III 2015) (licensing requirements); 10 C.F.R. Pt. 70 (implementing regulations). The AEA

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[1] Those functions were allocated among NRC, DOE, and EPA in the 1970s, after the Atomic Energy Commission was abolished. See *Huffman* v. *Western Nuclear, Inc.*, 486 U.S. 663, 666 n.4 (1988).

also requires licenses for the transfer or possession of any "byproduct material" that is generated during nuclear-fuel production or use. See 42 U.S.C. 2014(e)(1)-(4) (defining several categories of "byproduct material"); 42 U.S.C. 2111-2114 (licensing requirements); 10 C.F.R. Pts. 30-39 (implementing regulations). NRC also requires licenses for the operation of nuclear utilization and production facilities, including nuclear power plants, uranium-enrichment facilities, and fuel-fabrication facilities, as well as spent-nuclear-fuel storage installations. See 42 U.S.C. 2014(v) and (cc), 2131-2133; 10 C.F.R. Pts. 50, 52, 72 (implementing regulations).

2. Nuclear source material may be obtained through several means. This case concerns conventional uranium recovery, through which uranium ore is excavated from the ground through open-pit or underground mining and then subjected to above-ground chemical processing. Pet. App. 4a. NRC does not regulate the physical excavation of uranium ore through conventional mining (as opposed to other, "in situ" methods of uranium recovery). See *In re Hydro Res., Inc.*, 63 N.R.C. 510, 512-513 (2006).[2] NRC requirements begin to apply once uranium is removed from its "place of deposit in nature." 42 U.S.C. 2092; 10 C.F.R. 40.3.; p. 3, *supra*.[3]

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[2] "In situ" recovery involves injecting chemicals directly into the earth and pumping the resulting uranium-infused solution to the surface. Pet. App. 4a n.1, 54a-55a. This method is feasible only in certain geological settings, which are not alleged to be present in Virginia. *Id.* at 22a n.2 (Traxler, J., dissenting). NRC regulates the process of "in situ" recovery. See *In re Hydro Res., Inc.*, 63 N.R.C. at 512-513.

[3] NRC has exempted from regulation "unrefined and unprocessed ore containing source material," but any such ore may not be refined or processed without a license. 10 C.F.R. 40.13(b); see 10 C.F.R.

Once excavated, the uranium ore is transferred by truck or conveyor belt to a nearby mill for processing. See U.S. NRC, *Conventional Uranium Mills* (May 15, 2017), https://www.nrc.gov/materials/uranium-recovery/extraction-methods/conventional-mills.html. "Uranium mills are a part of the nuclear fuel cycle," as "[t]hey extract uranium from ore for eventual use in nuclear weapons and powerplants." H.R. Rep. No. 1480, 95th Cong., 2d Sess. Pt. 2, at 25 (1978). "[M]illing" involves physically grinding the ore into particles and then applying chemicals that separate the uranium from the surrounding rock. Pet. App. 54a-55a. This process generates a small quantity of concentrated uranium known as "'yellowcake,'" as well as a large amount of sandy waste known as "[t]ailings." *Id.* at 4a, 54a-55a & n.2 (citation omitted); see H.R. Rep. No. 1480, 95th Cong., 2d Sess. Pt. I, at 11 (1978) (noting that milling 2000 pounds of uranium ore yields "only 1 to 5 pounds of usable uranium"). Tailings are classified as a "byproduct material" under the AEA. 42 U.S.C. 2014(e)(2).

The yellowcake is "sold and shipped off-site for enrichment," Pet. App. 23a (Traxler, J., dissenting), while the tailings are typically stored at a nearby site. Because uranium mill tailings contain several substances that are potentially hazardous to human health, *id.* at 205a, 210a, they are subject to extensive federal regulation. EPA is responsible for promulgating generally applicable health, safety, and environmental standards associated with the processing and disposal of uranium mill tailings. 42 U.S.C. 2022(b)(1)-(2); see 40 C.F.R. Pt. 192 (containing

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40.4 (defining "[u]nrefined and unprocessed ore" as "ore in its natural form prior to any processing, such as grinding, roasting or beneficiating, or refining") (emphases omitted).

standards).[4] NRC implements those standards through regulations and site-specific licensing conditions. 42 U.S.C. 2111 (requiring licenses for byproduct materials); 10 C.F.R. 40.1-40.3, 40.20-40.21, 40.26-40.28, 40.31(h), 40.32, 40.51 (regulating tailings "[b]yproduct [m]aterial" as defined in 10 C.F.R. 40.4); 10 C.F.R. Pt. 40 App. A (establishing "criteria relating to the operation of uranium mills and the disposition of tailings or wastes" from milling) (capitalization omitted).

3. In 1959, Congress amended the AEA to "clarify the respective responsibilities * * * of the States and the [federal government] with respect to the regulation of byproduct, source, and special nuclear materials." 42 U.S.C. 2021(a)(1); see Act of Sept. 23, 1959, Pub. L. No. 86-373, 73 Stat. 688. That amendment empowered NRC to enter agreements that authorize States to license and regulate the transfer, possession, use, and disposal of nuclear source material, byproduct material, and/or sub-critical quantities of special nuclear material. 42 U.S.C. 2021(b). NRC approves such an agreement under Section 2021 if the State has developed a regulatory program that is both "adequate to protect the public health and safety with respect to the materials within the State covered by the proposed agreement" and "compatible with [NRC's] program for the regulation of such materials." 42 U.S.C. 2021(d)(1)-(2). A State that enters

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[4] For example, EPA has specified technical requirements for the design of surface impoundments that store tailings, 40 C.F.R. 192.32(a)(1); set maximum allowable groundwater concentrations for specified hazardous substances, 40 C.F.R. 192.32(a)(2); required the installation of a "permanent radon barrier" around nonoperational impoundments, 40 C.F.R. 192.32(a)(3)(i); and mandated monitoring and analysis of radon levels, 40 C.F.R. 192.32(a)(4).

into a Section 2021 agreement may "regulate the materials covered by the agreement for the protection of the public health and safety from radiation hazards." 42 U.S.C. 2021(b); S. Rep. No. 870, 86th Cong., 1st Sess. 12 (1959) (*Senate Report*) (stating that, absent such an agreement, NRC "has exclusive authority to regulate for protection against radiation hazards").

Certain responsibilities, including regulation of "the construction and operation" of nuclear power plants and uranium-enrichment facilities, are reserved to NRC and cannot be delegated to a State. 42 U.S.C. 2021(c). With respect to those responsibilities, Section 2021 gives States an advisory role, allowing them to be heard by NRC before such activities commence within a State. 42 U.S.C. 2021(*l*). Section 2021 also contains a savings clause, which provides that "[n]othing in this section shall be construed to affect the authority of any State or local agency to regulate activities *for purposes other than protection against radiation hazards*." 42 U.S.C. 2021(k) (emphasis added).

B. The Virginia Law

1. In the late 1970s, the "largest known uranium deposit in the United States" was discovered in Pittsylvania County, Virginia. Pet. App. 5a, 216a. Following that discovery, the Virginia General Assembly directed a commission to "evaluate the environmental effects of uranium exploration, mining and milling," and to identify "any possible detriments" from those activities to the "health, safety, and welfare of Virginia citizens." 1981 Va. Acts 1404 (Pet. App. 169a-170a). In 1982, the General Assembly enacted a law that permitted uranium exploration but imposed a one-year moratorium on uranium mining. See 1982 Va. Acts 426 (Pet. App. 170a-177a).

In 1983, the General Assembly extended the moratorium indefinitely. See 1983 Va. Acts 3 (1983 Act) (Pet. App. 177a-189a). It found that, "while uranium mining and milling activity can generate substantial benefits, it also raises a wide range of environmental and other local concerns." Pet. App. 178a. The 1983 Act directed that "permit applications for uranium mining shall not be accepted by any agency of the Commonwealth * * * until a program for permitting uranium mining is established by statute." *Id.* at 177a-178a (emphasis omitted). The 1983 Act also created a working group to consider, *inter alia*, the costs and benefits of permitting development of the Pittsylvania deposit, including consideration of the risk that "radionuclides" generated by "mining, milling and tailings management" could contaminate the surrounding water, air, and plant and animal life. *Id.* at 183a-184a.

In 1985, the commission and working group issued their final report. Pet. App. 219a. The working group observed that "there was no area where [it] had greater concern than on the potential effects of radiation which would be produced by [a] uranium development facility." D. Ct. Doc. 48-14, at 15 (Sept. 11, 2015). A majority of participants recommended lifting the moratorium, but only if the General Assembly "simultaneously" adopted certain recommendations "to assure adequate state regulation of uranium mining and milling." D. Ct. Doc. 48-17, at 8 (Sept. 11, 2015). Those included the "essential" recommendation that Virginia become an "agreement state" under Section 2021, with the right to regulate milling and tailings storage, *id.* at 6; cf. 42 U.S.C. 2021, as well as proposed technical limits on radiological emissions from milling and tailings-storage activities,

see D. Ct. Doc. 48-17, at 6-7. Despite those recommendations, the General Assembly neither lifted the moratorium nor enacted a "comprehensive mining, milling and tailing statute." See D. Ct. Doc. 48-14, at 7.

In 2009, Virginia signed a Section 2021 agreement with NRC. The Commonwealth thereby acquired regulatory authority over "[s]ource materials," "[s]pecial nuclear materials," and specified categories of "[b]yproduct materials" within the Commonwealth, Pet. App. 300a; see *id.* at 298a-305a; but the agreement expressly excluded the regulation of uranium mill tailings, see *id.* at 301a (excluding "[t]he regulation of byproduct material as defined in Section 11e.(2) of the [AEA]"); cf. 42 U.S.C. 2014(e)(2) (classifying tailings as byproduct material).

2. For several decades after the discovery of the Pittsylvania County uranium deposit, the owners of that deposit did not pursue efforts to overturn the Commonwealth's mining moratorium. In the mid-2000s, however, uranium prices rose sharply and the landowners lobbied for a repeal of the ban. Pet. App. 222a. The General Assembly, the Governor, and Commonwealth agencies commissioned studies addressing the feasibility, benefits, and risks of potential uranium development. See *id.* at 222a-223a, 227a-228a. In 2013, bills to lift the moratorium were introduced in the General Assembly, but those legislative efforts failed. *Id.* at 228a-229a.

C. The Proceedings Below

Petitioners are the current landowners of the Pittsylvania County uranium deposit. In 2015, petitioners brought suit in federal district court, asserting that the Commonwealth's moratorium was preempted by

the AEA, and seeking declaratory and injunctive relief. Pet. App. 190a-238a.

1. The district court dismissed petitioners' complaint for failure to state a claim. Pet. App. 53a-82a. The court noted petitioners' allegation that the moratorium rested on "radiological safety concerns" associated with milling and tailings management. *Id.* at 68a. The court concluded, however, that the moratorium was not preempted because it applied only to mining, and conventional uranium mining is not regulated by NRC. *Id.* at 71a-80a. The court recognized that the mining ban "might obviate one's decision to mill and manage the mill tailings" in Virginia, but it suggested that "such a consequence [wa]s too far attenuated" to result in preemption. *Id.* at 80a.

2. The court of appeals affirmed. Pet. App. 1a-52a.

a. The court of appeals agreed with the district court that petitioners had failed to state a claim that Virginia's moratorium is preempted. Pet. App. 13a-19a. The court of appeals recognized that "uranium milling and tailings storage" are "regulated by the NRC," and that under Section 2021(k), "[S]tates may therefore not regulate them except for purposes other than protection against radiation hazards." *Id.* at 13a-14a. The court found it dispositive, however, that "the plain language of the Commonwealth's ban does not mention uranium milling or tailings storage," and it declined to "look past the statute's plain meaning to decipher whether the legislature was motivated to pass the ban by a desire to regulate uranium milling or tailings storage." *Id.* at 14a. The court described this Court's decision in *Pacific Gas*, *supra*, as "warn[ing] against the 'unsatisfactory venture' of 'inquiry into legislative motive.'" Pet. App. 14a (quoting *Pacific Gas*, 461 U.S. at

216). The court of appeals also stated that it would be pointless to invalidate the statute based on a finding of improper purpose because the Commonwealth could simply reenact the law "with a different motive." *Ibid.*

The court of appeals further held that Virginia's moratorium was not preempted under conflict-preemption principles. Pet. App. 18a-19a. The court concluded that the moratorium would not pose an obstacle to Congress's objective of encouraging the development and use of nuclear energy because most uranium used in the United States' atomic-energy industry is imported, and because many uranium-extraction facilities in the United States—those on federal lands and those that use "in situ" recovery—are already licensed by NRC and thus beyond the reach of any state ban. *Id.* at 19a.

b. Judge Traxler dissented. Pet. App. 20a-52a. He explained that "established Supreme Court law makes clear that the AEA preempts state statutes enacted for the purpose of protecting against the radiological dangers of activities the AEA regulates," including "uranium milling and tailings management." *Id.* at 52a; see *id.* at 32a-38a. He further noted that, if the allegations in petitioners' complaint were taken as true, the Commonwealth had "banned uranium mining only as a means to prevent milling and tailings management from occurring in Virginia." *Id.* at 27a; see *id.* at 21a n.1, 40a-41a. Because "Congress has taken away a state's ability to limit mining for th[at] particular reason," *id.* at 20a, Judge Traxler concluded that petitioners had stated a valid preemption claim.

Judge Traxler further concluded that petitioners had stated a claim of preemption under conflict-preemption principles. He explained that a uranium-mining ban premised on radiological-safety concerns

would stand as an obstacle to the accomplishment of Congress's objective to permit the private sector to develop nuclear energy "to the maximum extent consistent with the common defense and security and with the health and safety of the public." Pet. App. 47a (quoting 42 U.S.C. 2013(d)). He expressed the view that Virginia had sought to prevent the private sector from developing nuclear energy because the State did "not trust[] that the federal government has sufficiently protected against the radiological dangers of uranium milling and tailings management." *Id.* at 47a-48a.

SUMMARY OF ARGUMENT

I. Petitioners have alleged that Virginia's uranium-mining moratorium is motivated by concern that uranium milling and tailings-management activities may pose nuclear-safety risks. If that allegation is true, the moratorium is preempted because Congress has entrusted such nuclear-safety regulation exclusively to the federal government. The courts below therefore erred in ordering, and upholding, dismissal of petitioners' complaint.

A. The AEA's text and structure demonstrate Congress's intent to reserve for the federal government control over the management of all radiation hazards stemming from activities licensed under the statute. The accompanying legislative history and subsequent agency interpretations confirm the federal government's primacy in this field.

B. The AEA's preemptive effect depends in part on the purpose of the state law at issue. State laws that are "grounded in safety concerns" about AEA-regulated activities encroach upon the field occupied by the federal government, even if the State purports to act within an area of traditional state authority. *Pacific Gas & Elec.*

Co. v. *State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 213 (1983). That purpose-based approach to field preemption in this sphere is rooted in the text of Section 2021(k), which preserves the States' authority to regulate certain activities "for purposes other than protection against radiation hazards." 42 U.S.C. 2021(k).

C. Petitioners have credibly alleged that Virginia banned uranium mining for the purpose of guarding against the radiation hazards posed by uranium milling and tailings management, which are activities regulated under the AEA. Accordingly, petitioners' complaint should not have been dismissed.

II. If Virginia's uranium-mining ban rests on a legislative judgment that uranium milling and tailings management cannot be conducted safely, it is preempted for the additional reason that it conflicts with federal law.

A. In enacting the AEA, Congress sought to ensure that nuclear technology would be safe enough for widespread development and use. State regulation premised on a contrary judgment that an aspect of nuclear development cannot safely be undertaken stands as an obstacle to the accomplishment and execution of Congress's objectives.

B. The AEA establishes alternative mechanisms through which States can participate in federal regulation of nuclear development. Allowing a State to address radiation hazards by banning uranium mining would conflict with Congress's decision that States should utilize other specific methods to participate in that regulatory process.

ARGUMENT

Because federal law is "the supreme Law of the Land," U.S. Const. Art. VI, Cl. 2, congressional enactments can preempt otherwise permissible state laws. See, *e.g.*, *English* v. *General Elec. Co.*, 496 U.S. 72, 78 (1990). In the absence of express statutory language that defines the scope of a federal law's preemptive effect, state law can be preempted in two ways. *Id.* at 79. First, "state law is pre-empted where it regulates conduct in a field that Congress intended the Federal Government to occupy exclusively." *Ibid.* Second, state law is "pre-empted to the extent that it actually conflicts with federal law," including when "state law 'stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress.'" *Ibid.* (citation omitted).

Under the AEA, the federal government "has occupied the entire field of nuclear safety concerns, except [for] the limited powers expressly ceded to the States." *Pacific Gas & Elec. Co.* v. *State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 212 (1983). If, as petitioners allege, Virginia banned uranium mining as a means of addressing the radiological hazards associated with uranium milling and tailings management, the Virginia law would fall squarely within the preempted field, even though the immediate object of the ban (uranium mining) is outside the NRC's jurisdiction. A state law motivated by such concerns would also conflict with Congress's determination—buttressed by the conclusions of the expert technical agencies assigned responsibility for such matters—that uranium milling and tailings management can be conducted safely under federal regulation.

I. THE ATOMIC ENERGY ACT OCCUPIES THE FIELD OF NUCLEAR-SAFETY REGULATION, AND IT PREEMPTS ANY STATE URANIUM-MINING BAN THAT IS MOTIVATED BY CONCERNS ABOUT THE RADIOLOGICAL SAFETY OF FEDERALLY REGULATED URANIUM MILLING AND TAILINGS MANAGEMENT

A. The Federal Government Has Exclusive Authority To Regulate Nuclear Safety Except To The Extent That It Has Delegated That Authority To States

1. Through the AEA, the federal government "occupie[s] the entire field of nuclear safety concerns, except [for] the limited powers expressly ceded to the States." *Pacific Gas*, 461 U.S. at 212. Congress first regulated nuclear safety in 1946 by creating a "program for Government control" of nuclear technology that excluded both the private sector and the States. 1946 Act § 1(b)(4), 60 Stat. 756.

When Congress ended that monopoly in 1954 to permit private development of nuclear energy, it did not relinquish federal control over the safety risks related to nuclear energy production, but instead concluded that nuclear source materials must continue to "be regulated in the national interest in order to provide for the common defense and security and to protect the health and safety of the public." 42 U.S.C. 2012(d); see 1954 Act § 2(d), 68 Stat. 921. The 1954 Act created a comprehensive regulatory and licensing scheme that vested a federal agency with responsibility for the radiological safety of each aspect of the nuclear fuel cycle. See pp. 2-6, *supra*. Although States retained their traditional authorities with respect to "the generation, sale, [and] transmission of electric power," 42 U.S.C. 2018; see 1954

Act § 271, 68 Stat. 960, "no significant role was contemplated for the States" regarding "'national security, public health, and safety,'" *English*, 496 U.S. at 81.

In 1959, by establishing the Section 2021 agreement program, Congress created a limited path for States to manage the radiation hazards of activities licensed under the AEA. 42 U.S.C. 2021(b). Under Section 2021, NRC may delegate to a State NRC's regulatory jurisdiction over the transfer, possession, use, and disposal of nuclear source material (including uranium ore), byproduct material (including tailings), and small quantities of special nuclear material (such as enriched uranium). *Ibid.*; see 42 U.S.C. 2014(e)(2) and (z). Pursuant to such an agreement, the State may "regulate the materials covered by the agreement for the protection of the public health and safety from radiation hazards." 42 U.S.C. 2021(b).

In establishing that cooperative program and "clarify[ing] the respective responsibilities under [the AEA] of the States and the [NRC] with respect to the regulation of byproduct, source, and special nuclear materials," 42 U.S.C. 2021(a)(1), Congress provided that nothing in the Section 2021 program would affect the authority of States "to regulate activities for purposes *other than protection against radiation hazards*." 42 U.S.C. 2021(k) (emphasis added). The italicized language "underscore[s] the distinction * * * between the spheres of activity left respectively to the Federal Government and the States." *Pacific Gas*, 461 U.S. at 210. Under that division of responsibilities, absent an agreement between a State and the federal government, "the Federal Government maintains complete control of the safety and 'nuclear' aspects of energy generation," while "the States exercise their traditional authority over the need for additional generating capacity, the

type of generating facilities to be licensed, land use, ratemaking, and the like." *Id.* at 212; see *id.* at 205.

2. The legislative history of the 1959 AEA amendments confirms Congress's intent that the federal government would maintain its primacy in the field of nuclear safety, even with the introduction of state regulation through Section 2021 agreements. The Joint Committee on Atomic Energy explained that Section 2021(k) was "intended to make it clear that the bill does not impair the State authority to regulate activities of AEC [Atomic Energy Commission] licensees for the manifold health, safety, and economic purposes *other than radiation protection.*" *Senate Report* 12 (emphasis added). Under that approach, the federal government would retain "exclusive authority to regulate for protection against radiation hazards until such time as the State enters into an agreement with the Commission to assume such responsibility." *Ibid.* That explanation reinforces the conclusion that Congress intended to maintain federal control over radiological safety risks, except where the authority to regulate such risks has been delegated to a State by agreement. Absent such an agreement, States would remain free to regulate the activities of AEC licensees, but not for the purpose of protecting against radiological safety risks.

3. An interpretation by the AEC, the federal agency originally charged with regulating nuclear safety under the AEA, further confirms federal supremacy in the regulation of radiological safety risks. In 1969, the AEC issued a regulation setting forth its general counsel's understanding of Section 2021(k). The regulation states that Congress, "in enacting [Section 2021(k)], intended to preempt to the Federal Government the total respon-

sibility and authority for regulating, from the standpoint of radiological health and safety, the specified nuclear facilities and materials." 34 Fed. Reg. 7273, 7274 (May 3, 1969).[5] That understanding reinforces the conclusion that Congress left no room for States to encroach upon the preempted radiological-safety field.

B. State Laws That Are Grounded In Nuclear-Safety Concerns About AEA-Regulated Activities Are Preempted

This Court has addressed the AEA's preemptive reach on several occasions and has determined that the statute's preemptive effect depends in part on the purpose of the state law at issue. Under that framework, state laws that are "grounded in safety concerns" about AEA-regulated activities like uranium milling and tailings management encroach upon the field occupied by the federal government and are preempted. *Pacific Gas*, 461 U.S. at 213.

1. In *Pacific Gas*, the Court considered a California law that banned new construction of nuclear power plants until a method for permanent disposal of nuclear waste became available. 461 U.S. at 198. After reviewing the relevant statutory provisions and legislative history, the Court concluded that "the Federal Government has occupied the entire field of nuclear safety concerns, except [for] the limited powers expressly ceded to the States." *Id.* at 212; see *Silkwood* v. *Kerr-McGee Corp.*, 464 U.S. 238, 240-241 (1984) (explaining that the Court in *Pacific Gas* had "examined the relationship between federal and state authority in the nuclear energy

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[5] This rule was codified at 10 C.F.R. 8.4. Although 10 C.F.R. Part 8 was subsequently removed, NRC "continues to adhere to the substance of the interpretation in § 8.4." 77 Fed. Reg. 21,625, 21,627 (Apr. 11, 2012).

field" and had "concluded that States are precluded from regulating the safety aspects of nuclear energy").

The Court observed that the AEA gives NRC "exclusive jurisdiction to license the transfer, delivery, receipt, acquisition, possession, and use of nuclear materials," *Pacific Gas*, 461 U.S. at 207, and permits state regulation of such materials only if authorized by agreement, *id.* at 208-209. The court also explained that the AEA's preservation of state authority to "regulate activities for purposes other than protection against radiation hazards," 42 U.S.C. 2021(k), "underscored the distinction" drawn by Congress "between the spheres of activity left respectively to the Federal Government and the States." 461 U.S. at 210. Under that division of responsibility, the federal government "regulate[s] the radiological safety aspects involved" in AEA-regulated activities—there, the "construction and operation of a nuclear plant"—while the States retain their "traditional responsibility" to "determin[e] questions of need, reliability, cost, and other related state concerns" not involving radiological safety. *Id.* at 205.

The *Pacific Gas* Court observed that California had not sought to regulate the ***manner*** in which a nuclear power plant should be constructed or operated, which would conflict with NRC's exclusive regulatory authority over plant construction and operation and would thus be preempted whether the State had acted out of concern for radiological-safety hazards or for some other reason. 461 U.S. at 212; see 42 U.S.C. 2021(c)(1). Rather, California had sought to regulate the antecedent question ***whether*** a plant should be constructed, not ***how*** it should be constructed. 461 U.S. at 212. California had argued that, "although safety regulation of nuclear plants by

States is forbidden," the State could exercise its traditional authority over generation to ban new construction of power plants "until [the State's] safety concerns are satisfied." *Ibid.*; see 42 U.S.C. 2018 (preserving States' authority to regulate "with respect to the generation, sale, or transmission of electric power produced through the use of nuclear facilities licensed by the [NRC]").

This Court "reject[ed] th[at] line of reasoning." *Pacific Gas*, 461 U.S. at 212. The Court explained that, because the federal government had "occupied the entire field of nuclear safety concerns," "[a] state moratorium on nuclear construction grounded in safety concerns [would] fall[] squarely within the prohibited field." *Id.* at 212-213. The Court found that California's moratorium on construction of new power plants survived preemption only because the State had plausibly explained—with reference to legislative reports prepared during the passage of the moratorium—that the purpose of its legislation was to address "economic problems, not radiation hazards." *Id.* at 213; see *id.* at 213-216. In reaching that conclusion, however, the Court made clear that, by giving NRC exclusive responsibility to address nuclear-safety risks, Congress had preempted States from regulating to protect against radiation hazards, even when a State purports to act within the scope of its traditional authority. *Id.* at 212.

2. In its subsequent decision in *English*, *supra*, the Court explained that the AEA establishes two related forms of field preemption. 496 U.S. at 84. Observing that *Pacific Gas* had "defined the pre-empted field, in part, by reference to the motivation behind the state law," the Court reaffirmed that a state law "motivated by safety concerns" about AEA-regulated activities is preempted. *Ibid.* The Court noted that this purpose-

based "approach to defining the field" finds support in the text of Section 2021(k), which recognizes continued state authority "to regulate activities for purposes other than protection against radiation hazards." *Ibid.* (quoting 42 U.S.C. 2021(k)).

The Court in *English* further defined the preempted field to include state regulations that are "'enacted out of nonsafety concerns'" but have a sufficiently "direct and substantial effect" on NRC licensees' decisions "concerning radiological safety levels." 496 U.S. at 84-85 (quoting *Pacific Gas*, 461 U.S. at 212). Thus, "even as * * * part of the pre-empted field is defined by reference to the purpose of the state law in question," another part "is defined by the state law's actual effect on nuclear safety." *Id.* at 84 (recognizing that "a finding of safety motivation" was sufficient, but not necessary, to "place a state law within the pre-empted field").[6] The Court in *English* thus reaffirmed that state law is preempted if it is grounded in concerns about the radiation hazards of activities and materials that are regulated under the AEA—a field occupied by the federal government. *Id.* at 84-85.

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[6] The Court in *English* held that the state-law claim at issue, a tort claim for intentional infliction of emotional distress brought by an employee of a nuclear-fuels production facility, was not preempted under either of those rationales. The Court concluded that the relevant state law was not "motivated by safety concerns," and that the effect of imposing tort liability for intentional infliction of emotional distress would be neither "direct nor substantial enough" to cause employers to alter radiological-safety protocols. 496 U.S. at 84-85.

C. Because Petitioners Have Credibly Alleged That Virginia's Uranium-Mining Ban Was Motivated By Nuclear-Safety Concerns About Federally Regulated Milling And Tailings Management, Their Complaint Should Not Have Been Dismissed

Respondents conceded below that, for purposes of their motion to dismiss petitioners' complaint, Federal Rule of Civil Procedure 12(b)(6) "required [respondents] to accept as true that Virginia enacted the [uranium-mining] moratorium based on radiological safety concerns." J.A. 216. The court of appeals therefore erred in affirming the district court's dismissal of petitioners' complaint. Because petitioners have credibly alleged that the ban is grounded in radiological-safety concerns about uranium milling and tailings management, which are within the federal government's regulatory jurisdiction, and because regulation of those activities for radiological-safety purposes has not been delegated to Virginia in a Section 2021 agreement, petitioners' complaint states a claim that the ban is preempted. That is so despite the fact that conventional uranium mining itself is not regulated by NRC.

1. Petitioners have adequately alleged that Virginia's moratorium falls within the preempted "field of nuclear safety concerns." *English*, 496 U.S. at 82 (citation omitted). Petitioners contend that the Commonwealth has banned uranium mining not because of concerns about mining per se, but because of fears about radiological hazards associated with the next steps of the uranium-development process, which NRC regulates under the AEA. Petitioners have alleged that the "true design" of the moratorium is "to act as an absolute bar on the construction of a tailings management facil-

ity," which Virginia legislators feared would lead to radioactive contamination of the Commonwealth's groundwater and environment. Pet. App. 232a.

If petitioners' allegations are correct, Virginia's moratorium is preempted. The radiological safety of milling and tailings management is subject to exclusive federal oversight, except to the extent that regulatory authority is expressly delegated to States by agreement. Just as "[a] state moratorium on nuclear construction * * * falls squarely within the prohibited field" if it is "grounded in safety concerns" about the operation of NRC-licensed nuclear power plants, *Pacific Gas*, 461 U.S. at 213, a State's moratorium on uranium mining is preempted if that moratorium is grounded in safety concerns about the operation of NRC-licensed milling and tailings-management facilities.

By entering into a Section 2021 agreement with NRC, Virginia has acquired regulatory authority over "[s]ource materials," "[s]pecial nuclear materials," and specified categories of "[b]yproduct materials" within the Commonwealth. Pet. App. 300a; see *id.* at 298a-305a. That agreement, however, expressly excludes authority to regulate uranium mill tailings. See *id.* at 301a (excluding "[t]he regulation of byproduct material as defined in Section 11e.(2) of the [AEA]"); cf. 42 U.S.C. 2014(e)(2) (defining "byproduct material" to include tailings). Within Virginia, the "field of nuclear safety concerns" related to tailings management from the process of uranium milling therefore remains within the regulatory jurisdiction of the federal government. *English*, 496 U.S. at 82 (citation omitted). If the Commonwealth's uranium-mining ban was motivated by such concerns, it is preempted because it encroaches on that federally regulated field.

2. In holding that Virginia's moratorium was not preempted, the court of appeals construed Section 2021(k) to prohibit States from directly regulating, for purposes of protecting against radiological hazards, only "activities" that are regulated under the AEA. Pet. App. 11a. Emphasizing that the moratorium "does not mention uranium milling or tailings storage," *id.* at 14a, the court concluded that the ban is not preempted because the activity it directly regulates—conventional uranium mining—is not regulated under the AEA, *id.* at 11a. The court "decline[d]" to "look past the statute's plain meaning to decipher whether the legislature was motivated" by an impermissible radiological-safety consideration. *Id.* at 14a. The court understood the AEA to preempt state law only when "a state purports to regulate an activity that is also regulated by the [AEA]" *and* the State lacks a "'non-safety rationale' for the state rule." *Id.* at 9a (citation omitted). That approach was misconceived.

a. A State's purposeful effort to address the radiological hazards that it associates with AEA-regulated activities is preempted even if the State attempts to regulate those hazards indirectly, by prohibiting necessary antecedent activities that fall outside direct federal control. The court of appeals' contrary understanding is irreconcilable with *Pacific Gas*. As explained above (pp. 19-20, *supra*), California acknowledged in that case that it could not enact safety regulations for the construction or operation of power plants because NRC exercises authority over plant construction and operation. 461 U.S. at 212; see 42 U.S.C. 2021(c)(1). The State instead contended that it could exercise its authority over generation to ban new construction of power plants altogether "until [the State's] safety concerns are satisfied."

461 U.S. at 212; see 42 U.S.C. 2018. This Court rejected that argument, explaining that "[a] state moratorium on nuclear construction *grounded in safety concerns* [would] fall[] squarely within" the federally occupied nuclear-safety field, even if the State had purported to act within the scope of its traditional authority. 461 U.S. at 212-213 (emphasis added).

The court of appeals in this case described the California law at issue in *Pacific Gas* as involving an activity "clearly committed to the NRC's regulatory authority." Pet. App. 10a n.2 (citation omitted). As the foregoing discussion demonstrates, that is incorrect. *Pacific Gas* involved two California laws: Section 25524.1(b), which required case-by-case approval of a proposed nuclear power plant's capacity to store spent nuclear fuel rods, and Section 25524.2 (Cal. Pub. Res. Code §§ 25524.1(b), 25524.2 (West 1977)), which banned all new nuclear power plants until a permanent nuclear-waste disposal solution was developed. 461 U.S. at 197-198.

The court of appeals suggested that the Court in *Pacific Gas* had analyzed the first provision, which the court described as regulating an activity—power-plant construction—that was committed to NRC's regulatory authority. Pet. App. 9a-10a & n.2. That understanding appears to underlie the court's determination that purpose-based preemption analysis is appropriate only when "a state purports to regulate an activity that is also regulated by the [AEA]." *Id.* at 9a. In fact, however, the Court in *Pacific Gas* analyzed only the second provision (discussed above) because it determined that the first was not ripe for review. 461 U.S. at 203. After concluding that the second provision (barring construction of nuclear power plants) did *not* directly regulate a subject committed to NRC's regulatory authority, the

Court looked to the purpose of the law to determine whether it encroached on the federal field of nuclear safety. *Id.* at 212-213. Contrary to the court of appeals' belief, the Court in *Pacific Gas* thus did not limit purpose-based preemption analysis to direct state regulation of AEA-regulated activities. See *id.* at 213 (finding it "necessary to determine whether there [wa]s a nonsafety rationale" for California's ban on plant construction); *English*, 496 U.S. at 84 (reaffirming that "part of the pre-empted field is defined by reference to the purpose of the state law in question"); 42 U.S.C. 2021(k).

b. The court of appeals also cited other language in which the *Pacific Gas* Court had commented on the difficulty of ascertaining "legislative motive." Pet. App. 14a (quoting *Pacific Gas*, 461 U.S. at 216). The *Pacific Gas* Court made those observations, however, only after stating that it was "necessary to determine whether there [wa]s a nonsafety rationale for" the challenged California law, 461 U.S. at 213; that California had asserted an economic, non-safety-related rationale for that law, *ibid.*; and that the court of appeals in that case had found the law to be "directed towards purposes other than protection against radiation hazards," *id.* at 214 (citation omitted). Here, by contrast, the Fourth Circuit simply "decline[d] to examine why the Commonwealth chose to ban uranium mining," Pet. App. 15a, thus treating as irrelevant petitioners' allegation that Virginia's mining moratorium is intended to address radiological-safety hazards associated with milling and tailings-management activities. That was error. Given the relevance of legislative purpose to the AEA preemption inquiry, and petitioners' credible allegations that Virginia has banned uranium mining to address concerns about the radiological-safety aspects of milling and tailings management, petitioners'

complaint states a valid preemption claim and should not have been dismissed under Rule 12(b)(6).[7]

3. Under the approach taken by the court below, a State could effectively subvert federal regulatory judgments in the field of nuclear safety simply by choosing, as the immediate object of state regulation, an antecedent activity that is not itself subject to federal regulation under the AEA. That approach would provide an easy roadmap for evasion of Congress's judgments regarding the States' carefully defined and limited role in this sphere.

a. In *Skull Valley Band of Goshute Indians* v. *Nielson*, 376 F.3d 1223 (2004), cert. denied, 546 U.S. 1060 (2005) (*Skull Valley*), the Tenth Circuit considered a series of Utah laws motivated by concerns about the storage and transportation of spent nuclear fuel (SNF). Although some of the challenged laws facially regulated SNF, others did not. One provision converted to state control a county road that led to a proposed SNF storage site. *Id.* at 1251-1252. Another provision restricted counties' ability to provide "law enforcement, fire protection, waste and garbage collection" to SNF storage facilities. *Id.* at 1247. A third provision abolished limited liability for stockholders in companies operating SNF facilities. *Id.* at 1250-1251.

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[7] Because petitioners' complaint was disposed of at the motion-to-dismiss stage, and the Fourth Circuit took as true petitioners' allegation that Virginia's moratorium was grounded in radiological-safety concerns about uranium milling and tailings management, this Court need not address what evidence would be necessary or sufficient to prove those allegations on remand. Rather, the Court need only decide whether these allegations, if proved, would provide a sound basis for holding that the Virginia moratorium is preempted.

Although the AEA does not regulate state roads, municipal services, or shareholder-liability rules, the Tenth Circuit applied the preemption test set forth in *Pacific Gas* and concluded that "a state cannot use its authority to regulate" such matters "as a means of regulating radiological hazards" associated with NRC-licensed activities. *Skull Valley*, 376 F.3d at 1248. The court ultimately found each provision preempted, based on evidence that the State had enacted them to discourage the transportation and storage of spent nuclear fuel "for reasons of radiological safety." *Id.* at 1252; see *id.* at 1245-1248, 1250-1253. The Tenth Circuit thus correctly ensured that Utah could not effectively preclude, based on nuclear-safety concerns, AEA-regulated transportation and storage activities that the State lacked power to regulate directly.

In this case, the court below attempted to distinguish *Skull Valley* by noting that "all but two of the challenged Utah laws specifically mentioned this NRC-regulated activity [*i.e.*, storage of SNF]," and that the remaining two provisions "w[ere] packaged with two other transportation regulations targeting [SNF] directly." Pet. App. 16a. But if that distinction is treated as controlling, a State can effectively prevent federally regulated conduct that it views as causing nuclear-safety hazards, by proscribing necessary precursors to that conduct, so long as it is careful to forgo any express statutory reference to nuclear-safety concerns or federally regulated activities. The Fourth Circuit's approach would provide an easy means for States to subvert Congress's determinations regarding the appropriate allocation of power between federal and state governments.

b. This Court has recognized in other contexts that a State cannot escape preemption simply by regulating

a stage of the production process or stream of commerce that lies outside the area of direct federal regulation. In *National Meat Ass'n* v. *Harris*, 565 U.S. 452 (2012), the Court considered a California law that prohibited slaughterhouses from selling meat products of nonambulatory animals. *Id.* at 459. California argued that its law was not preempted by the Federal Meat Inspection Act, 21 U.S.C. 601 *et seq.*, which provides that States may not impose requirements on slaughterhouse operations that exceed or differ from federal requirements, 565 U.S. at 457, because the challenged state law focused not on slaughterhouse *operations* but rather on commercial *sales*, which are traditionally subject to state regulation. *Id.* at 463-464. The Court rejected that argument and found the state regulation preempted. The Court explained that, although the state law nominally regulated sales, its inevitable effect was to require slaughterhouses to structure their operations in a different way. *Id.* at 464.

Likewise in *Engine Manufacturers Ass'n* v. *South Coast Air Quality Management District*, 541 U.S. 246 (2004), the Court considered a set of local rules that barred public and private fleet operators from buying vehicles that did not comply with the city's emission requirements. *Id.* at 249. The Court found the local rules preempted by a federal law that prohibited any state or local "standard[s] relating to the control of emissions from new motor vehicles." *Id.* at 251. The Court explained that, although the local rules did not compel manufacturers of new motor vehicles to meet any new emissions limits, the manufacturer's federally protected right to sell vehicles would be "meaningless in the absence of a purchaser's right to buy them." *Id.* at 255; see *American Trucking Ass'ns* v. *City of Los Angeles*,

569 U.S. 641, 652 (2013) ("We have often rejected efforts by States to avoid preemption by shifting their regulatory focus from one company to another in the same supply chain."); *Rowe* v. *New Hampshire Motor Transp. Ass'n*, 552 U.S. 364, 371-373 (2008) (finding preemption even though the State's regulation "t[old] *shippers* what to choose rather than *carriers* what to do").

So too here, where Congress has excluded States from the management of nuclear-safety hazards, Virginia cannot escape preemption simply by precluding a necessary antecedent activity (uranium mining) instead of acting on the nuclear fuel cycle itself. If petitioners can show that Virginia has banned uranium mining in order to prevent radiation hazards posed by uranium milling and tailings management, then Virginia has encroached on a field reserved for the federal government and the state law is preempted.

II. IF VIRGINIA'S URANIUM-MINING BAN WAS MOTIVATED BY RADIOLOGICAL-SAFETY CONCERNS, IT IS BARRED BY CONFLICT-PREEMPTION PRINCIPLES BECAUSE IT IS INCONSISTENT WITH THE JUDGMENT OF FEDERAL AUTHORITIES THAT URANIUM MILLING AND TAILINGS MANAGEMENT CAN BE SAFELY CONDUCTED IF PERFORMED IN ACCORDANCE WITH FEDERAL REQUIREMENTS

A state law that bans uranium mining based on radiological-safety concerns about milling and tailings management also runs afoul of conflict-preemption principles. Under the AEA, one of Congress's primary objectives is to ensure that nuclear technology is safe enough for widespread development and use. *Pacific Gas*, 461 U.S. at 213. A state law that aims to protect against radiation hazards by preventing nuclear development—as Virginia's ban is alleged to have done

here—would "stand[] as an obstacle to the accomplishment and execution" of that objective. *English*, 496 U.S. at 79 (citation omitted).

A. This Court recognized in *Pacific Gas* that "[a] state prohibition on nuclear construction for safety reasons" would "be in the teeth of the [AEA]'s objective to insure that nuclear technology be safe enough for widespread development and use—and would be pre-empted for that [additional] reason." 461 U.S. at 213. Such a state prohibition would subvert the federal government's implementation of the AEA because "a state judgment that nuclear power is not safe enough to be further developed would conflict directly with the countervailing judgment of the NRC." *Ibid.*

In eliminating the federal monopoly over nuclear technology, Congress sought to encourage private parties to develop and use nuclear energy, consistent with public health and safety. 42 U.S.C. 2013(d). Here, Virginia has allegedly "interfere[d] with the objective of the federal regulation" by deciding for itself that milling and tailings management cannot be safely undertaken, *Pacific Gas*, 461 U.S. at 219, thus "unilaterally * * * prevent[ing] the involvement of the very private-sector forces that the [AEA] was designed to unleash." Pet. App. 47a-48a (emphasis omitted) (Traxler, J., dissenting). Congress committed those safety considerations to the federal government's oversight. If petitioners' allegations are true, Virginia's moratorium has "circumvented the AEA's requirements and frustrated its objectives" by intentionally "prevent[ing] the occurrence of" activities that Congress intended the federal government to regulate, for reasons committed to the federal government's jurisdiction. *Id.* at 21a, 52a.

To be sure, "Congress did not intend that nuclear power be developed 'at all costs,'" and it generally left States free to address concerns other than radiological safety. *Pacific Gas*, 461 U.S. at 200; see *id.* at 222-223. But Congress and executive branch agencies have made the judgment that milling and tailings management may be undertaken safely under federal regulations. *Id.* at 213. A moratorium intended to render such activities infeasible, based on a State's disagreement with that federal safety judgment, "stands as an obstacle" to the fulfillment of Congress's objectives. *English*, 496 U.S. at 79 (citation omitted).

B. A state law that bans uranium mining in order to prevent radiological hazards purportedly associated with downstream AEA-regulated activities also conflicts with Congress's chosen system for state participation in the regulatory field of nuclear-safety concerns. Under the AEA, any State that is concerned about radiological hazards from uranium milling and tailings management may seek NRC's authorization to regulate uranium mill tailings. See pp. 6-7, *supra*; 42 U.S.C. 2021. If granted that authority, a State may even impose radiological-safety standards that are "more stringent than" those adopted and enforced by NRC. 42 U.S.C. 2021(*o*)(2). NRC continues to regulate these activities in the national interest, however, and "[i]f the NRC determines that a State has a program that disrupts the orderly pattern of regulation among the collective regulatory efforts of the NRC and other Agreement States, i.e., creates conflicts, gaps, or duplication in regulation, the program would be found not compatible." 62 Fed. Reg. 46,517, 46,521 (Sept. 3, 1997).

Congress has separately permitted States to address certain low-level radiation hazards. 42 U.S.C. 2023(a).

Thus, States may directly regulate "on the basis of radiological hazard" the disposal or off-site incineration of low-level radioactive waste, "if the [NRC] * * * exempts such waste from regulation." *Ibid.*; see 42 U.S.C. 2021b(9)(A)(i) (excluding uranium mill tailings from the definition of "low-level radioactive waste"). States concerned about the safety of AEA-regulated activities may also participate in NRC licensing and rulemaking proceedings and may seek judicial review of NRC's determinations if they are aggrieved. See *Entergy Nuclear Vermont Yankee, LLC* v *Shumlin*, 733 F.3d 393 (2d Cir. 2013); *Skull Valley*, 376 F.3d at 1254. And even with respect to the construction and operation of nuclear power plants, where Congress has prohibited the federal government from delegating regulatory authority to a State, see 42 U.S.C. 2021(c), NRC must notify a State of any license application filed with NRC and must afford the State a reasonable opportunity to express its view concerning whether the application should be granted. 42 U.S.C. 2021(*l*).

Congress has thus established very specific mechanisms for state involvement in addressing radiological-safety hazards. Pursuant to one such statutory method, Virginia has entered into a Section 2021 agreement with NRC, but the Commonwealth declined to seek authority to regulate the radiological-safety aspects of uranium mill tailings. See pp. 9, 23, *supra*. Petitioners allege that the Commonwealth has attempted to address the same concerns through the alternative means of banning uranium mining. If that was in fact the Commonwealth's motivation, Virginia has impermissibly second-guessed the federal government's judgment that uranium milling and tailings management are safe enough

to proceed under federal standards. See *Gade* v. *National Solid Wastes Mgmt. Ass'n*, 505 U.S. 88, 98-101 (1992) (opinion of O'Connor, J.) (holding that federal law preempted an Illinois attempt to enforce training standards for hazardous-waste workers that were stricter than federal standards without using the mandated process of an approved state plan). That conflict with the judgment of federal regulatory authorities, and with Congress's chosen methods for state involvement in the sphere of nuclear safety, provides an additional ground for concluding that petitioners' complaint states a claim of federal preemption.

CONCLUSION

The judgment of the court of appeals should be reversed, and the case should be remanded for further proceedings.

Respectfully submitted.

NOEL J. FRANCISCO
Solicitor General
JEFFREY H. WOOD
Acting Assistant Attorney General
MALCOLM L. STEWART
Deputy Solicitor General
ANN O'CONNELL
Assistant to the Solicitor General
VARU CHILAKAMARRI
Attorney

ANDREW P. AVERBACH
Solicitor
CHARLES E. MULLINS
JEREMY M. SUTTENBERG
Attorneys
U.S. Nuclear Regulatory Commission

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Supreme Court of the United States

VIRGINIA URANIUM, INC., et al.,

Petitioners,

v.

JOHN WARREN, et al.,

Respondents.

On Writ of Certiorari to the United States Court of Appeals for the Fourth Circuit

BRIEF FOR *AMICUS CURIAE* THE CHAMBER OF COMMERCE OF THE UNITED STATES OF AMERICA IN SUPPORT OF PETITIONERS

STEVEN P. LEHOTSKY
MICHAEL B. SCHON
U.S. CHAMBER LITIGATION CENTER
1615 H Street, NW
Washington, DC 20062

ERIN E. MURPHY
Counsel of Record
ANDREW C. LAWRENCE
KIRKLAND & ELLIS LLP
655 Fifteenth Street, NW
Washington, DC 20005
(202) 879-5000
erin.murphy@kirkland.com

Counsel for Amicus Curiae

July 26, 2018

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STATEMENT OF INTEREST[1]

The Chamber of Commerce of the United States of America is the world's largest business federation. It represents 300,000 direct members and indirectly represents the interests of more than 3 million companies and professional organizations of every size, in every economic sector, and from every region of the country.

An important function of the Chamber is to represent the interests of its members in matters before the courts, Congress, and the Executive Branch. To that end, the Chamber regularly files *amicus curiae* briefs in cases that raise issues of concern to the Nation's business community. The Chamber has participated as *amicus curiae* in nearly every significant federal preemption case decided by this Court over the past decade. *See, e.g.*, *Kindred Nursing Ctrs. L.P. v. Clark*, 137 S. Ct. 1421 (2017); *Coventry Health Care of Mo., Inc. v. Nevils*, 137 S. Ct. 1190 (2017); *Puerto Rico v. Franklin Cal. Tax-Free Trust*, 136 S. Ct. 1938 (2016); *Gobeille v. Liberty Mut. Ins. Co.*, 136 S. Ct. 936 (2016); *Nw., Inc. v. Ginsberg*, 134 S. Ct. 1422 (2014); *Nat'l Meat Ass'n v. Harris*, 565 U.S. 452, 455 (2012); *AT&T Mobility LLC v. Concepcion*, 563 U.S. 333 (2011); *Williamson v. Mazda Motor of Am., Inc.*, 562 U.S. 323 (2011); *Bruesewitz v. Wyeth LLC*, 562 U.S. 223 (2011); *Wyeth v. Levine*, 555

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[1] No counsel for any party authored this brief in whole or in part, and no entity or person, aside from *amicus curiae*, its members, and its counsel, made any monetary contribution toward the preparation or submission of this brief. Counsel of record for all parties have consented to this filing in letters on file with the Clerk's office.

U.S. 555 (2009); *Altria Grp., Inc. v. Good*, 555 U.S. 70 (2008); *Riegel v. Medtronic, Inc.*, 552 U.S. 312 (2008).

The Chamber and its members have a strong interest in this case, as the decision below poses a threat both to the Nation's nuclear energy industry and to preemption doctrine as a whole.

SUMMARY OF ARGUMENT

The Atomic Energy Act assigns the federal government "broad regulatory authority over the development of nuclear energy." *Vt. Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, Inc.*, 435 U.S. 519, 525-26 (1978). Indeed, this Court concluded more than 30 years ago that the federal government has "occupied the entire field of nuclear safety concerns," and that the Atomic Energy Act accordingly preempts any state law "grounded in safety concerns" arising from the production of nuclear energy. *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n* ("*PG&E*"), 461 U.S. 190, 212-13 (1983). In the decades since, the Court has reaffirmed that conclusion, reiterating that state laws "motivated by safety concerns" stemming from nuclear-related activities fall squarely within the field reserved to the federal government. *See English v. Gen. Elec. Co.*, 496 U.S. 72, 84 (1990); *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 249 (1984).

Congress' decision to reserve the safety-related regulation of nuclear power development to the federal government makes eminent sense, as that is a field that the federal government is uniquely well suited to regulate. Because nuclear technology began as an exclusively federal enterprise, the states do not have any traditional experience, let alone expertise,

with determining how to manage the safety risks that the development of nuclear energy may pose. Moreover, in large part because this is an area with which they may be unfamiliar, states have an unfortunate tendency to succumb to local "not in my backyard" complaints about the perceived (unfounded as they may be) safety risks of in-state nuclear power development. Such local impediments to the development of nuclear power pose a risk not just to the Nation's energy grid and the economy it supports, but to the national security and defense interests that domestic development of nuclear power advances. In short, the development of nuclear energy is a matter of both abiding federal expertise and abiding federal interest.

The decision below poses a grave threat to the safety-regulation role that Congress has reserved to the federal government. This Court has held time and again that the preemption inquiry in this context turns not just on *what* a state seeks to regulate, but *why*. That should have made this an easy case, as Virginia has banned mining of the Nation's single largest uranium deposit not for economic or other non-preempted reasons, but simply because Virginia determined that uranium production is not safe enough. Indeed, at least at this motion-to-dismiss stage, the state does not dispute that it banned uranium *mining* at the Coles Hill deposit as a prophylactic safety measure to prevent radiation exposure allegedly associated with uranium *milling and tailings management*—activities that everyone agrees may be regulated only by the federal government. But that is not a judgment for Virginia to make, as any state law "grounded in [radiological]

safety concerns falls squarely within the prohibited field" occupied by the federal government. *PG&E*, 461 U.S. at 213.

In concluding otherwise, the Fourth Circuit not only ran afoul of the Atomic Energy Act and this Court's decisions interpreting it, but created a roadmap for evading the preemptive force of federal law. According to the Fourth Circuit, even assuming Virginia's mining ban rests on precisely the kind of safety judgment forbidden to the states, it is not preempted because the ban does not say *on its face* that the state has prohibited uranium *mining* to prevent purportedly unsafe *milling and tailings management* from occurring at Coles Hill. In other words, according to the Fourth Circuit, a state may escape the preemptive force of federal law through the simple expedient of declining to make explicit in its laws its preempted motivations. The decision below thus creates a loophole not just in the Atomic Energy Act, but in all manner of federal statutes and regulations, as it effectively invites states to use labels and form to try to circumvent federal law.

That result cannot be reconciled with the long line of decisions from this Court reiterating that the "Supremacy Clause cannot be evaded by formalism." *Haywood v. Drown*, 556 U.S. 729, 742 (2009). Simply put, when a state admittedly regulates for the specific purpose of countermanding federal judgments in an exclusive federal field, its actions are preempted no matter what label or form it may use. By concluding otherwise, the decision below threatens to disrupt not just the Atomic Energy Act and the critical industry of

nuclear power generation, but preemption doctrine as a whole.

ARGUMENT

I. Congress Has Made The Eminently Sensible Judgment That The Federal Government Is Best Positioned To Regulate The Complex Field Of Nuclear Safety Concerns.

Nuclear energy is unusual among energy sources in that it began as an exclusively federal enterprise. At the dawn of the atomic age 75 years ago, the federal government maintained a "federal monopoly" on "the use, control, and ownership of all nuclear technology." *English*, 496 U.S. at 80. When Congress passed the Atomic Energy Act in 1954, it "relaxed" that federal monopoly, "determin[ing] that the national interest would be best served if the Government encouraged the private sector to become involved in the development of atomic energy for peaceful purposes under a program of federal regulation and licensing." *PG&E*, 461 U.S. at 194, 207. And with that relaxation came the introduction of a regulatory role for the states in "determining questions of need, reliability, cost and other related state concerns." *Id.* at 205. But while Congress left states free to "exercise their traditional authority" in these areas, *id.* at 212, Congress jealously guarded for the federal government "extensive control over the manner in which th[e] development [of nuclear energy] occur[s]," *Silkwood*, 464 U.S. at 249. In doing so, Congress reserved to the federal government exclusive authority to "regulate [nuclear] activities for purposes" of "protection against radiation hazards." 42 U.S.C. §2021(k).

That division of authority makes eminent sense. "Congress' decision to prohibit the states from regulating the safety aspects of nuclear development was premised on its belief that the [federal government] was more qualified to determine what type of safety standards should be enacted in this complex area." *Silkwood*, 464 U.S. at 250. And understandably so, as the federal government's historical monopoly over nuclear technology left states without the experience or expertise to regulate the process of developing nuclear power. To be sure, states may be better positioned to make non-safety-related judgments about which mix of power, and in what locations, best serves local economic and other interests. But states simply did not have—and in most instances still do not have—the extensive experience the federal government has acquired in "determin[ing] what type of safety standards" are most appropriate "in this complex area." *Id.*

That federal expertise, moreover, has only grown over time. The Nuclear Regulatory Commission ("NRC") has been acclaimed for its "high technical competence," which "cover[s] a wide range of technical areas." Int'l Atomic Energy Agency, *US Nuclear Regulatory Commission*, https://bit.ly/2u0ofDq (last visited July 24, 2018); *see also* U.S. Nuclear Regulatory Commission, *Backgrounder on National Security*, https://bit.ly/2mG6Lde (last visited July 24, 2018) ("NRC-regulated nuclear facilities are considered among the most secure of the nation's critical infrastructure."). And the federal government has developed considerable experience with nuclear technology through the military—experience that states simply are not in a position to develop. It is thus

little surprise that Congress reserved to the federal government "the entire field of nuclear safety concerns," *PG&E*, 461 U.S. at 212-13; this is an area that the federal government is simply better suited to regulate.

Of course, nuclear power is also an area in which the federal government has a uniquely strong interest, as nuclear energy is indispensable to our national security. That much is clear from the text of the Atomic Energy Act itself, which repeatedly emphasizes that one of its core purposes is to promote "the common defense and security." 42 U.S.C. §2013(c)-(e). In the decades since Congress passed the Atomic Energy Act, the importance of nuclear power to national security and defense has only grown. *See, e.g.*, Energy Futures Initiative, Inc., *The U.S. Nuclear Energy Enterprise: A Key National Security Enabler* 15 (Aug. 2017), https://bit.ly/2LoCEEP ("A vibrant domestic nuclear energy industry, including a healthy supply chain ..., is essential for the achievement of U.S. national security objectives."). To take just two examples, "[u]ranium is the predominant source of fuel for ... fissile material for nuclear warheads," Pet.App.4a, and "the U.S. Navy's nuclear-powered submarines and aircraft carriers are fueled with [highly enriched uranium] and rely upon its availability," Pet.App.348a.

Nuclear energy is also critical to the national economy. Reactors fueled by uranium are responsible for fully 20% of the electricity produced in this country, Pet.App.202a, and nuclear energy offers many benefits that confirm its value to a diversified energy economy. For example, nuclear power

"accounts for nearly two-thirds of the country's emissions-free power generation," and nuclear reactors "operate at about a 90% capacity factor, higher than any other fuel type." ***Expand Nuclear Energy Use and Commit to a Nuclear Waste Solution***, U.S. Chamber of Commerce Inst. for 21st Century Energy, http://bit.ly/1nyGP0I (last visited July 24, 2018). In no small part because of these benefits, the United States "has the greatest number of nuclear reactors in the world at present, and therefore the greatest demand for nuclear fuel." CA4 JA236.[2] Any disruption in the production of nuclear power thus poses a grave threat not just to individual states, but to the national economy.

Finally, this is also an area particularly well suited to federal regulation because states have an unfortunate tendency to yield to often very vocal "not in my backyard" constituencies when it comes to the development of nuclear energy within their borders. This is a case in point. Coles Hill is the single "largest natural deposit of uranium in the United States and one of the largest in the world," with an estimated 119 million pounds of uranium ore. Pet.App.201a. It is thus no exaggeration to say that whether the deposit may be mined will have a massive impact on the entirety of the Nation's nuclear power industry. And the impact is even more profound for Virginia and its residents, as estimates suggest that mining the Coles Hill deposit could "generate $4.8 billion of net revenue for Virginia businesses." Pet.App.202a. Yet the state is still unwilling to allow Coles Hill to be mined, out of

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[2] Citations to "CA4 JA" refer to the Joint Appendix filed in the Fourth Circuit.

professed concerns that the development of uranium can *never* be made safe enough for Virginians. That extraordinary hostility to the prospect of local nuclear energy development is powerful evidence of the wisdom of Congress' decision to give the federal government the power to "determine what type of safety standards should be enacted in this complex area." *Silkwood*, 464 U.S. at 250.

In short, the development of nuclear energy is a matter of both abiding federal expertise and abiding federal interest. It is thus imperative that courts guard just as jealously as Congress has the federal government's exclusive authority over "the entire field of nuclear safety concerns." *PG&E*, 461 U.S. at 212-13.

II. The Decision Below Is Impossible To Reconcile With This Court's Atomic Energy Act Cases.

The decision below poses a grave threat to the federal government's authority to regulate the development of nuclear power, as it guts the Atomic Energy Act of a core element of its preemptive force. The Atomic Energy Act is unusual in that "the pre-empted field" under the Act is defined, "in part, by ... the *motivation* behind the state law"—specifically, whether it is animated by concerns about radiological safety. *English*, 496 U.S. at 84 (emphasis added). That is clear on the face of the statute. Not only does the Act give the federal government the power to regulate nuclear power plants and the antecedent activities of uranium "milling" (*i.e.*, the extraction of uranium from ore) and "tailings management" (*i.e.*, the handling of radioactive waste

products generated by uranium milling). *See, e.g.*, 42 U.S.C. §§2111(a), 2014(e)(2), 2133; 10 C.F.R. pt. 40, app. A. The Act also expressly provides that states retain the power to regulate nuclear energy-related activities only "for purposes *other than protection against radiation hazards*." 42 U.S.C. §2021(k) (emphasis added). It is thus not only appropriate, but essential, for courts to identify the *purpose* of state regulation in this area, as that is the only way to determine if it is preempted.

This Court's decision in *PG&E* is illustrative. There was no dispute in that case about *what* the state was trying to regulate: It wanted to impose a moratorium on nuclear power plants. But to answer the question of whether that moratorium was preempted, this Court had to determine *why* the state imposed it, and "whether there [wa]s a non-safety rationale." *PG&E*, 461 U.S. at 213. If there was not, then the moratorium could not stand, as any state regulation "grounded in [radiological] safety concerns falls squarely within the prohibited field" occupied exclusively by the federal government. *Id.*; *accord* Brief for the United States as *Amicus Curiae* 13 ("a State's moratorium on uranium mining is preempted if that moratorium is grounded in safety concerns about the operation of NRC-licensed milling and tailings-management facilities"). Simply put, "a state judgment that nuclear power is not safe enough to be further developed would conflict directly with the countervailing judgment" of Congress. *PG&E*, 461 U.S. at 213.

That should have made this an easy case. Virginia does not contest (and cannot contest, at this

motion to dismiss stage) petitioners' allegations that the state "legislature banned uranium mining only as a means to prevent milling and tailings management from occurring in Virginia," out of professed concerns about the safety of those federally regulated activities. Pet.App.26a-27a. Virginia's ban thus "conflict[s] directly with the countervailing judgment" of Congress and the NRC that existing federal regulation suffices to address safety concerns about milling and tailings management. *PG&E*, 461 U.S. at 213. Yet the Fourth Circuit concluded that petitioners' preemption claim failed *as a matter of law*, "declin[ing] the invitation" to "look past the statute's plain meaning to decipher whether the legislature was motivated to pass the ban by" concerns about the safety of milling and tailings management. Pet.App.14a.

That reasoning is impossible to reconcile with this Court's decisions in *PG&E* and *English*. As those cases confirm, petitioners' request that the courts determine the purpose behind Virginia's ban is no mere "invitation." It is the inexorable command of the Atomic Energy Act and this Court's precedents interpreting it. *See, e.g.*, *PG&E*, 461 U.S. at 213; *English*, 496 U.S. at 84. Lower courts may no more "decline" the "invitation" to make that determination than they may "decline" the "invitation" to apply the Supremacy Clause. By refusing to answer the very question that this Court has deemed central to determining whether state regulation in this area is preempted, the decision below deprives the Atomic Energy Act of its core preemptive force.

III. The Decision Below Provides A Roadmap For State And Local Governments To Evade The Preemptive Force Of Federal Law.

The Fourth Circuit's decision not only guts the Atomic Energy Act of much of its preemptive force, but also provides a roadmap to states seeking to evade the preemptive force of all manner of federal statutes. As this Court has admonished time and again, it is the substance of a state law, not its form, that controls the preemption inquiry. *See, e.g.*, *Aetna Health Inc. v. Davila*, 542 U.S. 200, 214-15 (2004); *Howlett v. Rose*, 496 U.S. 356, 382-83 (1990); *Allis-Chalmers Corp. v. Lueck*, 471 U.S. 202, 211 (1985). States thus cannot evade the Supremacy Clause through the simple expedient of labeling their laws something other than what they are. To be sure, in many preemption cases, the substantive inquiry turns on the *effect* of a state law, not its purpose. But when Congress chooses, as it did in the Atomic Energy Act, to define "the pre-empted field, in part, by ... the motivation behind the state law," *English*, 496 U.S. at 84, then courts must look beyond labels and form to determine the purpose behind the challenged law. Otherwise, states could avoid preemption merely by declining to make their true motivations explicit—as Virginia has now succeeded in doing here.

Indeed, even accepting the Fourth Circuit's mistaken conclusion that it matters only *what* Virginia sought to regulate, not *why*, the decision below still cannot be reconciled with the principle that preemption turns on substance, not form. Here, the state does not dispute that the "legislature banned uranium mining *only as a means to prevent milling*

and tailings management from occurring in Virginia," Pet.App.26a-27a (emphasis added)—two activities that no one disputes may be regulated only by the federal government, *see* Pet.App.12a-13a. In other words, the state does not dispute that it sought to ban mining only as a means to regulate (or, more aptly, prohibit) the very activities that everyone agrees it may not regulate. Yet the Fourth Circuit nonetheless concluded that the state's ban was not preempted, simply because the "the plain language of the ... ban *does not mention* uranium milling or tailings storage." Pet.App.14a (emphasis added). Thus, under the Fourth Circuit's view, a state is free to countermand federal regulation to its heart's content, so long as it is smart enough not to "mention" preempted fields on the face of its law.

That reasoning finds no support in any of this Court's preemption jurisprudence. Take this Court's cases involving the Federal Arbitration Act ("FAA"). Just this past Term, this Court reiterated that states may not "target arbitration *either by name or by more subtle methods*, such as by 'interfer[ing] with fundamental attributes of arbitration.'" *Epic Sys. Corp. v. Lewis*, 138 S. Ct. 1612, 1622 (2018) (emphasis added). Just as the FAA "preempts any state rule discriminating *on its face* against arbitration," so, too, the FAA "displaces any rule that *covertly* accomplishes the same objective by disfavoring contracts that (oh so coincidentally) have the defining features of arbitration agreements." *Kindred Nursing Ctrs. Ltd. P'ship v. Clark*, 137 S. Ct. 1421, 1426 (2017) (emphasis added). Thus, if a state adopts a "rule classifying as unconscionable arbitration agreements that fail to abide by the Federal Rules of Evidence, or that

disallow an ultimate disposition by a jury (perhaps termed 'a panel of twelve lay arbitrators' to help avoid preemption)," the rule is preempted all the same, regardless of whether it happens to "mention" arbitration. *AT&T Mobility LLC v. Concepcion*, 563 U.S. 333, 342 (2011).

This Court's cases interpreting the Natural Gas Act ("NGA")—an area of law implicating similar interests as this case—reflect the same principle. Under the NGA, the regulation of wholesale natural-gas prices lies with the federal government, while the regulation of retail natural-gas prices remains with the states. *Oneok, Inc. v. Learjet, Inc.*, 135 S. Ct. 1591, 1594 (2015). But that does not mean that the analysis begins and ends with determining *what* a state seeks to regulate. While state laws that "direct[ly] regulat[e] the prices of [interstate] wholesales of natural gas" are preempted, the same is true of "state regulations which would indirectly achieve the same result," "whether or not framed to achieve ends ... ordinarily within the ambit of state power." *N. Nat. Gas Co. v. State Corp. Comm'n of Kan.*, 372 U.S. 84, 90-91 (1963); *see also, e.g., Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293, 308 (1988) ("the things Act 144 regulation is *directed at*, the control of rates and facilities of natural gas companies, are precisely the things over which FERC has comprehensive authority" (emphasis added)).

This Court's decision in *National Meat Association v. Harris*, 565 U.S. 452 (2012), is also illustrative. There, the Court addressed whether the Federal Meat Inspection Act ("FMIA")—which preempts state statutes addressing the front-end

processes of inspecting, handling, and slaughtering livestock—preempted a state statute that prohibited slaughterhouses, at the back-end, from *selling* meat that satisfied all federal requirements. *Id.* at 455, 463-64. Although "the FMIA's preemption clause does not usually foreclose 'state regulation of the commercial sales activities of slaughterhouses,'" *id.* at 463, the Court nonetheless held the state law preempted, for any other conclusion would allow "any State [to] impose any regulation on slaughterhouses just by framing it as a ban on the sale of meat produced in whatever way the State disapproved." *Id.* at 463-64. That, the Court explained, "would make a mockery of the FMIA's preemption provision." *Id.* at 464.

The same logic carried the day in *Engine Manufacturers Association v. South Coast Air Quality Management District,* 541 U.S. 246 (2004). There, the Court considered whether the Clean Air Act, which prohibits states from adopting or enforcing "standard[s] relating to the control of emissions," preempted local regulations requiring fleet operators to buy only those vehicles satisfying state pollution standards that far exceeded federal requirements. *Id.* at 249, 251. Addressing the argument that the rules escaped preemption because they targeted the *purchase* of vehicles, and did not directly regulate the *manufacturing* process, the Court concluded that such a distinction "would make no sense" "for pre-emption purposes." *Id.* at 255. As the Court explained, "[t]he manufacturer's right to sell federally approved vehicles is meaningless in the absence of a purchaser's right to buy them." *Id.*

Haywood v. Drown likewise "confirms that the Supremacy Clause cannot be evaded by formalism." 556 U.S. at 742. There, the Court considered whether a state—"[m]otivated by the belief that damages suits filed by prisoners against state correction officers were by and large frivolous and vexatious"—could shield those officers from lawsuits under §1983 by stripping state courts of jurisdiction to hear them. 556 U.S. at 731, 733. Although the Court acknowledged that, as a formal matter, a state has inherent "authority to organize its courts," the Court concluded that "a State's invocation of 'jurisdiction'" could not be a "trump that ends the Supremacy Clause inquiry." *Id.* at 740-41. As the Court explained, Congress made a judgment through §1983 that "*all* persons who violate federal rights while acting under color of state law shall be held liable for damages," *id.* at 737, and a state cannot countermand that judgment through "an immunity statute cloaked in jurisdictional garb," *id.* at 742.

Of course, these are but a handful of the cases in which this Court has made clear that states cannot evade the preemptive force of federal law through the simple expedient of including or omitting magic words in their legislation. Yet that is precisely the result that the Fourth Circuit's decision below countenances. So long as a state "does not mention" on the face of its law its intent to target an area reserved by Congress to the federal government, the preemption inquiry is at an end. Indeed, the Fourth Circuit allowed Virginia's ban to escape preemption even though the state *admits* (at least at this stage) that the ban rests on a judgment that milling and tailings management pose too great of radiological safety concerns—a

judgment that "conflict[s] directly with the countervailing judgment" of Congress and the NRC. *PG&E*, 461 U.S. at 213.

This Court should therefore reverse the decision below, restore the full preemptive force of the Atomic Energy Act, and reaffirm that "[t]he force of the Supremacy Clause is not so weak that it can be evaded by mere mention of [one] word" instead of another. *Howlett*, 496 U.S. at 382-83. Any other disposition not only will provide a roadmap for states to impede Congress' efforts to encourage domestic uranium mining, but will embolden them to employ the same clever labeling and workarounds in all manner of other federally regulated areas. Neither outcome has anything to recommend it.

CONCLUSION

For the foregoing reasons, this Court should reverse the judgment below.

Respectfully submitted,

STEVEN P. LEHOTSKY
MICHAEL B. SCHON
U.S. CHAMBER LITIGATION CENTER
1615 H Street, NW
Washington, DC 20062

ERIN E. MURPHY
Counsel of Record
ANDREW C. LAWRENCE
KIRKLAND & ELLIS LLP
655 Fifteenth Street, NW
Washington, DC 20005
(202) 879-5000
erin.murphy@kirkland.com

Counsel for Amicus Curiae

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Supreme Court of the United States

VIRGINIA URANIUM, INC., *et al.*,
Petitioners,

v.

JOHN WARREN, *et al.*,
Respondents.

On Writ of Certiorari to the United States Court of Appeals for the Fourth Circuit

BRIEF OF SENATOR TOM COTTON, SENATOR JIM INHOFE, AND SENTATOR TED CRUZ AS *AMICI CURIAE* IN SUPPORT OF PETITIONERS

GORDON D. TODD *
KIMBERLY A. LEAMAN
T.J. HERRON
SIDLEY AUSTIN LLP
1501 K Street, N.W.
Washington, D.C. 20005
(202) 736-8000
gtodd@sidley.com

Counsel for Amici Curiae

* Counsel of Record

July 26, 2018

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INTEREST OF *AMICI*[1]

Amici curiae are three currently serving United States Senators, with distinct interests in the national security and federalism issues presented by this case. Specifically, *amici* have an interest in the proper interpretation of the Atomic Energy Act's preemptive scope, to ensure that local interests do not circumvent federal priorities on issues of national concern. Domestically produced uranium is one such issue. Not only is a domestic supply of uranium critical to the United States' security and defense strategy, it also affects the Nation's status as an independent and forward-looking leader on the global stage. *Amici* are responsible for developing federal legislation related to nuclear policy, making them uniquely situated to address the strategic importance of uranium. *Amici* further have a vested interest in ensuring that federal law on this issue is both respected and effectuated.

Senator Tom Cotton, an army veteran, represents the State of Arkansas and serves on the Senate Committee on Armed Services and the Senate Select Committee on Intelligence. His assignments afford him a distinct perspective on the need for nuclear material as it relates to military defense and readiness in today's geopolitical climate. He is keenly aware of the risks in failing to meet that need.

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[1] No counsel for a party authored this brief in whole or in part, and no party or counsel for a party made a monetary contribution intended to fund the preparation or submission of this brief. No one other than *amici curiae*, its members, or its counsel made a monetary contribution to the preparation or submission of this brief. *Amici* certify that all parties have consented to the filing of this brief.

Senator Jim Inhofe represents the State of Oklahoma and serves on the Senate Committee on Armed Services. He also chairs the Subcommittee on Readiness and Management Support, where he is responsible for overseeing policy relating to military readiness and construction, defense energy and environmental programs, and conventional ammunition procurement. Senator Inhofe has a particular interest in the role nuclear energy plays in defense readiness.

Senator Ted Cruz represents the State of Texas and serves on the Senate Committee on Armed Services. As part of his work on that Committee, Senator Cruz is responsible for advancing policy related to the Department of Defense, military research and development, and nuclear energy. Senator Cruz has long been an advocate for a strong and cohesive national defense, which in turn requires a well-articulated nuclear regulatory framework.

As part of their service on the Committee on Armed Services, *amici* are also members of the Subcommittee on Strategic Forces, which steers federal policy on nuclear and strategic forces, nuclear defense, defense environmental management programs, and arms control and non-proliferation programs. The Subcommittee also has oversight over several agencies devoted to nuclear safety and defense. Accordingly, *amici* are intimately familiar with the issues that drove Congress to allocate responsibility for nuclear safety between the federal government and the states, and *amici* continue to work on matters committed to the federal government by the Atomic Energy Act.

In light of their deep experience, *amici* agree that national interests require the Atomic Energy Act's jurisdictional balance between the federal government and the states be respected. Because the decision below upsets that balance and jeopardizes na-

tional interests, *amici* agree with Petitioners that the Court should reverse the Fourth Circuit.

SUMMARY OF ARGUMENT

The Fourth Circuit's determination that the Commonwealth of Virginia's ban on uranium mining is not preempted by the Atomic Energy Act (the "Act") *solely* because the ban's literal text addresses an activity not covered by the Act provides states a clear path to nullify federal policy in favor of local preferences through creative backchannels and artful wording. Tying the Act's preemptive scope to the strict language of a statute disregards Congress's prior decision to vest regulation of radiological hazards with the federal government and undermines federal policy concerning assets, like uranium, that are critical to our Nation's security and defense.

The Act and its amendments memorialize Congress's cumulative attempt to grapple with the military, political, social, and economic consequences of harnessed nuclear power and to allocate oversight responsibility for those consequences in a workable regulatory framework. The Act's legislative history demonstrates the careful consideration with which Congress allocated federal and state responsibilities for regulating nuclear safety. In early amendments to the Act, Congress committed oversight responsibility of radiological hazards to the federal government. However, Congress also created an agreement-based scheme whereby the civilian-led Nuclear Regulatory Commission ("the Commission")[2] can transfer certain

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[2] The Energy Reorganization Act of 1974, 42 U.S.C. § 5801 *et seq.*, abolished the Atomic Energy Commission and transferred its regulatory functions to the Nuclear Regulatory Commission. References to "the Commission" shall refer to both agencies.

of its regulatory functions to the states. Absent transfer of authority pursuant to a valid agreement, the *federal* government retains exclusive authority to regulate activities covered by the Act for purposes of radiological safety. That is, federal law preempts state law.

Pursuant to this Court's precedents, which require consideration of the purpose and effect of a state statute vis-à-vis radiological safety, Virginia's ban is preempted by the Act. The ban purports to regulate an activity that is properly within Virginia's jurisdiction: uranium mining on nonfederal lands. In purpose and effect, however, the ban actually targets post-mining activities (uranium *milling* and *tailings* storage and disposal) because of those activities' perceived radiological hazards. However, such post-mining activities are not accounted for in Virginia's current agreement with the Commission, making regulation of those activities for purposes of radiological safety the exclusive province of the federal government.

The Act's legislative history demonstrates the careful consideration with which Congress allocated federal and state responsibilities for regulating nuclear safety. In willfully blinding itself to the purpose of Virginia's ban, the Fourth Circuit upended the Act's deliberate jurisdictional balance without any consideration for the national and international consequences that flow from the military, political, and economic interests that drove Congress to assign regulatory responsibility in the manner it did. The Fourth Circuit also disregarded the Court's prior teachings and refused to consider the plethora of evidence disclosing the motivation behind the ban: perceived radiological hazards associated with uranium milling and tailings management.

Restricting the Act's preemptive scope would permit states to do indirectly what they cannot do directly, carrying far-reaching and serious risks. In this case, local-based preferences threaten the implementation of uniform federal policy over uranium, a strategic national resource, at a critical time. Domestic production and development of uranium is at historic lows, exacerbated in no small part by Virginia's ill-conceived blockade of the largest known uranium deposit in the United States. But an unduly formalistic approach that eschews any analysis of purpose or policy would extend well beyond this case, affecting a host of nuclear-related activities covered by the Act, and no less critical to our common national interests. Accordingly, *amici* urge the Court to reverse the Fourth Circuit and reaffirm that the Act's preemptive scope encompasses both the purpose and effect of any state regulation.

ARGUMENT

I. RESTRICTING THE ACT'S PREEMPTIVE SCOPE TO ACTIVITIES REGULATED BY THE ACT WITHOUT REGARD TO PURPOSE OR EFFECT WOULD UNDERMINE IMPLEMENTATION OF UNIFORM FEDERAL POLICY OVER ISSUES OF NATIONAL IMPORTANCE.

A. The Act's Preemption Framework Reflects Congress's Careful Determination Of Federal And State Competencies Balanced Against Federal And State Interests.

The development of nuclear energy and technology in the United States has been uniquely federal in nature. Indeed, the Manhattan Project—the genesis of the United States' nuclear program—was sponsored

by the federal government. *See* Arthur W. Murphy & D. Bruce La Pierre, *Nuclear "Moratorium" Legislation in the States and the Supremacy Clause: A Case of Express Preemption*, 76 COLUM. L. REV. 392, 394–95 (1976). While the atomic bomb dramatically demonstrated the military and political implications of atomic energy, the role atomic energy would come to play in civilian life was less clear. Congress struggled to develop a legislative framework capable of handling atomic energy's unique policy issues. *See, e.g.*, Byron S. Miller, *A Law is Passed — The Atomic Energy Act of 1946*, 15 U. CHI. L. REV. 799 (1948).

Reflecting Congress's then-judgment that the federal government was the only body prepared to address these policy issues, the inaugural 1946 version of the Act committed nuclear energy exclusively to federal authority by way of the Commission. Murphy & La Pierre, *supra*, at 395. The 1946 Act further declared a national policy—"subject at all times to the paramount objective of assuring the common defense and security"—to direct efforts toward "improving the public welfare, increasing the standard of living, strengthening free competition in private enterprise, and promoting world peace." Atomic Energy Act of 1946, ch. 724, § 1, 60 Stat. 755, 756.

Within a decade, however, Congress "concluded that the national interest would be best served if the Government encouraged the private sector to become involved in the development of atomic energy for peaceful purposes under a program of federal regulation and licensing." *Duke Power Co. v. Carolina Envtl. Study Grp., Inc.*, 438 U.S. 59, 63 (1978). Accordingly, Congress passed the Atomic Energy Act of 1954, which allowed private entities to own and operate nuclear facilities that produced and utilized special nuclear materials, including uranium. *See*

H. Hamilton Hackney III, Comment, *Recent Congressional Proposals for Providing Relief to the Domestic Uranium Industry: Saving Grace or Just Another Expensive Bailout?*, 10 J. ENERGY L. & POL'Y 171, 175 (1990).

The 1954 Act encouraged private development "by opening the door to private construction, ownership, and operation of commercial nuclear-power reactors under the strict supervision of the [Commission]." *English v. Gen. Elec. Co.*, 496 U.S. 72, 81 (1990). However, both the 1946 and 1954 versions of the Act stipulated that the federal government remained "the sole owner of uranium products." *Atlas Corp. v. United States*, 895 F.2d 745, 748 (Fed. Cir. 1990). The Commission, therefore, maintained "pervasive control" over all aspects of uranium procurement, production, sales, and disposal. *Id.*

Termination of the federal monopoly on the development of nuclear energy exposed states to a variety of potential health and environmental hazards that they had previously been precluded from regulating. *Federal-State Relationships in the Atomic Energy Field: Hearings Before the J. Comm. on Atomic Energy*, 86th Cong. 25 (1959) ("*Hearings*"). Consequently, federal and state agencies endeavored to cooperate in regulating those hazards, with the federal government providing extensive assistance in the form of information-sharing, training, funding, and model regulations and standards. *Id.* at 25–26.

Nonetheless, there became evident a "need for clarification of the responsibilities of the Federal and State Governments for regulating atomic energy." *Id.* at 26; *see also, id.* at 393. As the nuclear power and mining industries grew, states pressured the federal government for the right to regulate those activities occurring within their borders. Ronald H. Rosenberg,

Uranium Mining and Milling in Virginia: An Analysis of Regulatory Choice, 4 VA. J. NAT. RESOURCES L. 81, 96 (1984). Federal, state, and industry officials agreed on the need for clarification, but the precise allocation of authority was hotly debated, in part because then-existing state efforts and competencies were far from uniform. *See Hearings* at 127–31, 394.

Two competing considerations drove the uncertainty as to which government was properly responsible for regulating nuclear hazards. On the one hand, providing for the welfare and public health of its citizens had traditionally fallen within the states' core police powers. *Id.* at 20, 274, 289. Conversely, the legal enforceability of any state regulation of atomic energy was questionable: "the 1954 act set[ ] forth a directive to the Federal agency to adopt a comprehensive scheme of regulations," and courts frequently treated such direction as preempting any corresponding state regulation. *Id.* at 126. Moreover, "under the act, the objectives of Federal regulations are to assure protection of the public while not unduly burdening industrial progress, and thus more restrictive requirements by the State might be deemed as interference with national nuclear development policy." *Id.*

An early bill drafted by the Commission "provided for the exercise of dual or concurrent jurisdiction by both the [Commission] and the States over activities licensed by the Commission." *Id.* at 27. To minimize "inconsistency," the proposed bill excluded licensing responsibilities already exercised by the Commission and provided that state requirements "may not be 'in conflict with' those adopted by the Commission." *Id.* at 290. However, the notion of concurrent jurisdiction elicited concerns over duplication of efforts, industry burden from conflicting and overlapping re-

quirements, and whether the federal or a state government would prevail in the event of conflicting standards or decisions, particularly as it came to overregulation. *Id.* at 20, 120, 129, 131. In light of these concerns, shared federal and state jurisdiction over radiological safety was rejected. *Id.* at 290.

Instead, Congress

> provide[d] a statutory framework within which the States may assume an independent regulatory role in extensive areas now occupied by the Atomic Energy Commission on a basis which will assure appropriate protection for public health and safety and compatibility between the regulatory programs of the States and those of the Commission.

Id. at 290. Specifically, the 1959 amendments established a program through which the Commission could transfer to states limited portions of its regulatory authority to license and regulate nuclear byproduct materials, source materials (including uranium), and certain quantities of special nuclear materials. Qualified states, known as "Agreement States," were authorized to enter into an agreement executed by the Governor of the state and the Chairman of the Commission under which the state could *partially* assume the Commission's regulatory duties. 42 U.S.C. § 2021(b).

There are several steps to becoming an Agreement State. The Governor of the applicant state must certify that the state is willing to "assume regulatory responsibility" for nuclear material, including uranium. 42 U.S.C. § 2021(d)(1). The Governor must also certify that the state possesses a "program for the control of radiation hazards adequate to protect the public health and safety." *Id.* In turn, the Commission

must make several independent findings, including that the state's program is compatible with and at least as restrictive as the Commission's own rules and regulations. *Id.* § 2021(d)(2); *see also* S. Rep. No. 86-870, at 11 (1959). The Commission further reserves the right to take back all or part of these regulatory functions from a state upon notice and hearing, or peremptorily in emergency circumstances. 42 U.S.C. § 2021(j).

Certain regulatory responsibilities, because of their nature, were not eligible for transfer to an Agreement State. The federal government retains exclusive jurisdiction over "areas in which the technical safety considerations are of such complexity that it is not likely that any State would be prepared to deal with them during the foreseeable future," as well as those "areas as to which interstate, national, or international considerations seem to be paramount." *Hearings* at 291. Also excepted from the program were activities associated with high levels of radioactive hazards, such as managing nuclear reactors. *Id.* As reported by the Joint Committee on Atomic Energy: "These are areas which, because of their special hazards, or for reasons of Federal responsibility, are believed desirable for continued responsibility by the Commission." S. Rep. No. 86-870, at 10.

With regard to those responsibilities that may be devolved to the states, the Act provides that once an agreement is established, "[d]uring the duration of such an agreement . . . the State shall have authority to regulate the materials *covered by the agreement* for the protection of the public health and safety from radiation hazards." 42 U.S.C. § 2021(b) (emphasis added). Otherwise, state and local authorities may only "regulate activities for purposes *other than* protection against radiation hazards." *Id.* § 2021(k). In

other words, "State laws and regulations concerning the control of radiation hazards from byproduct, source, and special nuclear materials shall not be applicable except pursuant to an agreement entered into with the Commission."[3] *Hearings* at 488; *see also* S. Rep. No. 86-870, at 12 ("As indicated elsewhere, the Commission has exclusive authority to regulate for protection against radiation hazards until such time as the State enters into an agreement with the Commission to assume such responsibility."); *id.* at 3 ("[I]n order for a State to so regulate or license [materials covered by the Act], it must first establish an adequate program for this purpose and enter into an agreement with the Commission.").

The Act's legislative history demonstrates the careful consideration with which Congress allocated federal and state responsibilities for regulating nuclear safety. In so doing, Congress considered both the competencies of the states as well as the national or international implications that may flow from an activity regulated by the Act. Truly local concerns were left to the province of the states, while issues of na-

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[3] This language originally appeared in one of the near-final proposed bills, but was subsequently removed "as unnecessary," because "[w]ith or without this sentence, in order for a State to so regulate or license [materials under the Act] it must first establish an adequate program for this purpose and enter into an agreement with the Commission." S. Rep. No. 86-870, at 3. The removal was "*not* intend[ed] to change the substantive effect of the bill" and was "*not* intend[ed] to leave any room for the exercise of concurrent jurisdiction by the States to control radiation hazards." *Hearings* at 500 (emphases added). Rather, it meant to provide courts with "greater latitude in sustaining certain types [of laws, (*e.g.*, zoning requirements)] which have *purposes other than control of radiation hazards*, even though such requirements might have an *incidental* effect upon the use" of material licensed by the Commission. *Id.* (emphases added).

tional or international significance, including highly technical and highly hazardous activities, were committed exclusively to the Commission's control.

For those regulatory aspects that could potentially be transferred to the states, the federal government assumed responsibility for supervising that transition. As part of that responsibility, the Commission must ensure that the state has in place a regulatory scheme that both adequately protects against radiological harms *and* meets federal expectations for achieving the purposes of the Act—namely, the private development and use of nuclear energy for peacetime purposes, subject, of course, to the national interest in common defense and security. *See* 42 U.S.C. § 2011; S. Rep. No. 83-1699, at 3, 4 (1954). At bottom, the responsibility for setting policy over radiological hazards rests with the federal government.

B. Formalistic Limits To The Act's Preemptive Scope Upset The Federal/State Jurisdictional Balance And Permit State And Local Governments To Override The Federal Government On Issues Of National Importance.

In preempting a field of regulation, Congress has determined an area is of such significance or national import that it must be governed by a single, national policy for which state or local authorities may not substitute their own judgments.

Here, "the federal government has occupied the entire field of nuclear safety concerns, except the limited powers expressly ceded to the States." *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 212 (1983). In line with traditional tenets of preemption that look to "whether 'the

matter on which the State asserts the right to act is in any way regulated by the Federal Act,'" *id.* at 213 (quoting *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 236 (1947)), "the Court defined the pre-empted field, in part, by reference to the *motivation* behind the state law," *English*, 496 U.S. at 84 (emphasis added). The remaining "part of the field is defined by the state law's actual effect on nuclear safety." *Id.* In other words, "state regulation of matters directly affecting" aspects of radiological safety committed exclusively to the federal government also impermissibly intrude upon the preempted field. *Id.* Taken together, this Court has made clear that the preemptive scope of the Act is not limited to the "plain language" of the challenged statute.

And for good reason. Federal preemption could be rendered meaningless if state or local authorities could circumvent federal policy through artful wording or other creative backchannels. *Cf. Entergy Nuclear Vt. Yankee, LLC v. Shumlin*, 733 F.3d 393, 416 (2d Cir. 2013) (explaining that courts do not "blindly accept the articulated purpose . . . for preemption purposes," because that would permit states to "nullify nearly all unwanted federal legislation" (quoting *Greater N.Y. Metro. Food Council, Inc. v. Giuliani*, 195 F.3d 100, 108 (2d Cir. 1999))). The danger is particularly acute here given the public penchant to stigmatize nuclear development out of fear associated with the radiological hazards of nuclear material. *See, e.g.*, M.V. Ramana, *Nuclear power and the public*, 67 Bull. of the Atomic Scientists, July 1, 2011, at 43-51. Any approach to preemption that turns a blind eye to motive and effect would give state and local authorities carte blanche to override federal policy concerning nuclear material and radiological hazards, so long as the pertinent language does not pur-

port to regulate activities under the Commission's exclusive jurisdiction.

In fact, some states have previously attempted to do just that, but were prevented by courts that looked beyond the text of the statute to understand the motivating purpose behind the statute. *See Entergy Nuclear*, 733 F.3d 393; *Skull Valley Band of Goshute Indians v. Nielson*, 376 F.3d 1223 (10th Cir. 2004). In *Entergy*, the Second Circuit held as preempted a Vermont statute that required state legislative approval to build a nuclear power plant. 733 F.3d at 403, 428. While the statute purported to regulate the generation, sale, and transmission of electric power, the Second Circuit observed that Vermont's legislative history "expressed concern about radiological safety" associated with nuclear power plants and further "expressed a desire to evade federal preemption." *Id.* at 420. In holding the statute preempted, the court explicitly noted that the preemption inquiry "does not end at the text of the statute." *Id.* at 416. Similarly, in *Skull Valley*, the Tenth Circuit went beyond the plain language of a Utah statute that facially regulated state highways and right-of-way restrictions when transporting spent nuclear fuels to determine that those laws were enacted for the purpose of regulating radiological safety and, thus, were preempted. 376 F.3d at 1251–53.

Virginia's moratorium on uranium mining is cut from the same cloth as the statutes at issue in *Entergy* and *Skull Valley*. While it purports to regulate activities within the Commonwealth's purview, local concern regarding the radiological hazards associated with *post*-mining activities—activities that fall within the Commission's jurisdiction—has sustained the ban

since its inception.[4] Moreover, the mining ban effectively operates as a ban on those same post-mining activities allowing Virginia to regulate indirectly what it may not regulate directly.

Critically, while Virginia is a partial Agreement State under the Act, the 2009 agreement expressly carves out uranium mill tailings from the Commonwealth's regulatory authority. *See* William Brice Fiske, *Virginia's Moratorium: Is Uranium Mining on the Horizon in the Commonwealth?*, 37 WM. & MARY ENVTL. L. & POL'Y REV. 289, 307–08 (2012). Nor does Virginia possess the statutorily required regulatory structure to assume responsibility for uranium millings due to its moratorium over conventional mining. *See id.* (citing William Robert G. Burnley, *How Will Virginia Regulate Uranium Mining?*, 60 VA. LAW., 41, 43 (2011)).[5] The power to regulate the radiological

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[4] *See, e.g.*, Pet. App. 239a–297a; Associated Press, *Proposed East Coast Uranium Mine Dividing Va.*, USA Today (Jan. 26, 2013), https://www.usatoday.com /story /news/nation/2013/01/26/virginia-uranimum-mine/1866489/; Jonathon Wilson, *Rural Community Debates Pros and Cons of Uranium Mining*, WAMU (Mar. 29, 2013), http://wamu.org/story/13/03/29/rural_community_debates_pros_and_cons_of_uranium_mining/; Ana Komnenic, *Amid Fierce Political Opposition, US Uranium Miner Suspends Mine Plans*, Mining.com (Dec. 15, 2013), http://www.mining.com/amid-fierce-political-opposition-us-uranium-miner-gives-up-on-one-of-the-worlds-largest-uranium-deposits-66417; KTAR Newsroom, *Drive to Mine Uranium in Va. Comes to Quiet Pause*, KTAR News (Dec. 14, 2013), http://ktar.com/story/112903/drive-to-mine-uranium-in-va-comes-to-quiet-pause/.

[5] Should a state assume responsibility for tailings management, the state is required to comply with federal standards governing the safety of that material. *See* Uranium Mill Tailings Radiation Control Act of 1978, Pub. L. No. 95-604, § 204(e), 92 Stat. 3021 (providing for federal regulation of radiological hazards associated with uranium tailings left over from the mill-

hazards associated with uranium milling and tailing activities therefore remains *exclusively* with the Commission. 42 U.S.C. § 2021(b), (k). Congress and the Commission have already determined that the post-mining processing and subsequent waste storage of uranium is sufficiently safe to license. The Commonwealth may not substitute its own judgment regarding the safety of post-mining activities by effectively blocking such activities within its borders. Reducing the preemptive inquiry to a text-based analysis would effectively rubberstamp state legislation challenged under the Act.

C. Domestic Production Of Uranium Is A National Strategic Interest.

As Judge Traxler observed in his dissent below, "[t]he stakes in this case are significant." Pet. App. 21a. *Amici*, as sitting Senators and members of the Senate Committee on Armed Services—including the subcommittee charged with overseeing nuclear defense policy—are aptly suited to speak to those stakes.

Most importantly, the availability and development of uranium, and particularly, the *domestic production* of uranium, is integral to the Nation's security. International treaty obligations prohibit the use of imported foreign enriched uranium, or uranium enriched on U.S. soil using foreign technology, for defense purposes. George David Banks & Michael Wallace, Ctr. for Strategic & Int'l Studies, *Recapturing U.S. Leadership in Uranium Enrichment* 5 (Nov. 2013). Any uranium used for defense purposes must be "produced by and procured from domestic sources

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ing process); 10 C.F.R. § 150.31 (requiring state compliance with any standards promulgated by the Commission or the Environmental Protection Agency pursuant to UMTRCA).

using U.S. enrichment technology." *Id.* However, there remains just one active enrichment plant in the United States, which is European-owned and utilizes foreign enrichment technology.[6] World Nuclear Ass'n, *US Nuclear Fuel Cycle*, http://www.world-nuclear.org/information-library/country-profiles/countries-t-z/usa-nuclear-fuel-cycle.aspx (last updated July 2018); *see also* Banks & Wallace, *supra*, at 3. Thus, the United States is not presently able to generate any enriched uranium for defense purposes.

In addition, domestic production of uranium has plummeted since the Cold War due to market pressures from heavily subsidized European enriched uranium and the importation of low-enriched uranium from Russia under the Megatons to Megawatts Program.[7] Banks & Wallace, *supra*, at 2. In 2017, domestic production of uranium concentrate, which came from just seven facilities in three states, fell 16% year-over-year and was the lowest annual pro-

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[6] A demonstration plant, American Centrifuge, was intended to develop new U.S. technology for enrichment but the Department of Energy cut all funding for the plant in September 2015, and the plant demobilized shortly thereafter. *See* World Nuclear News, *American Centrifuge Demonstration Plan Completes Operations* (Feb. 22, 2016), http://www.world-nuclear-news.org/C-American-Centrifuge-demonstration-plant-completes-operations-2202167.html.

[7] The Megatons to Megawatts Program was a commercially financed government program in which weapons-grade uranium from dismantled Russian nuclear warheads was recycled into low-enriched uranium for use in U.S. nuclear power plants. *See* Centrus, *Megatons to Megawatts*, http://www.centrusenergy.com/who-we-are/history/megatons-to-megawatts/ (last visited July 23, 2018). During the Megatons to Megawatts Program, which lasted from 1994 through 2013, almost half of the uranium used in U.S. nuclear power plants came from Russia. World Nuclear Ass'n, *US Nuclear Fuel Cycle*, *supra*.

duction level since 2004. U.S. Energy Info. Admin., *Domestic Uranium Production Report – Annual*, Nuclear & Uranium (May 22, 2018), https://www.eia.gov/uranium/production/annual/. In 2018, domestic uranium production is expected to drop even further, to approximately 0.7 million pounds, the lowest production since 1949 and less than 2% of the uranium required to power U.S. reactors. *See* Uranium Energy Corp., *Uranium Energy Corp 2018 Letter to Shareholders* (Jan. 29, 2018), http://www.uraniumenergy.com/news/releases/index.php?content_id=645. Even though the Coles Hill uranium deposit provides a significant, legally viable source of uranium—indeed, it is the largest such deposit in the United States—Virginia's blanket ban precludes any development that might aid in the Nation's defense.

While some experts suggest that the United States has sufficient high-enriched uranium and depleted material to meet its defense needs in the near future, they acknowledge that stockpiles of low-enriched uranium, used to produce the quick-decaying tritium that is essential for several military applications, are far more limited. Banks & Wallace, *supra*, at 8-9. Although high-enriched uranium can be downblended to produce low-enriched uranium, because the United States "no longer has any capacity to produce [high-enriched uranium] to replace consumed material," the availability of high-enriched uranium for this purpose is unknown, and most high-enriched stocks "are reserved primarily for defense program strategic reserves and for production of fuel for the U.S. Navy." *Id.* at 9. Significant dependence on foreign uranium creates a serious national security concern.

Moreover, the demand for high-enriched uranium is likely to increase, further depleting critical domestic uranium stores. The Navy is increasing its oceanic

surveillance as "a very critical element of [U.S.] national security and [the U.S.'s] ability to influence and ensure that . . . vital interests are protected throughout the world." *See* CBS News, *Inside the U.S. Navy's Newest Fastest Submarines* (May 10, 2017), http://www.cbsnews.com/news/us-navy-newest-submarine-squad-virginia-class/. In January 2017, the Pentagon approved a $128 billion executive program to build a brand new fleet of 12 nuclear submarines, Anthony Capaccio, *Fleet of 12 Nuclear Submarines in Line for Pentagon Approval*, Bloomberg (Jan. 4, 2017), https://www.bloomberg.com/news/articles/2017-01-05/new-nuclear-armed-subs-win-pentagon-approval-before-obama-leaves, which garners significant support from *amici* and other members of the Committee on Armed Services. However, expansion of the Navy's nuclear fleet faces "major obstacles," including the limited ability of nuclear fuel producers to ramp up the supply of fuel. *See Trump's Navy Warship Expansion Plan Faces Major Obstacles*, Newsweek (Mar. 20, 2017), http://www.newsweek.com/donald-trump-navy-warships-navy-expansion-571281.

The limited availability of homegrown enriched uranium also damages the Nation's ability to implement its nuclear nonproliferation agenda. The United States has a "significant stake" in preventing the proliferation of foreign enrichment facilities, because those facilities can easily be converted to produce weapons-grade uranium. Banks & Wallace, *supra*, at 10. To reduce foreign powers' need to develop their own enrichment technology, the United States has previously sold certain countries uranium, already enriched, with the condition that it be used solely for peaceful purposes. *Id.* In so doing, the United States has "use[d] market power to strengthen its non-

proliferation efforts" by "back[ing] up its policy objectives with a means to achieve them." *Id.* at 10–11. But as domestic production and export of uranium decline, the United States risks losing market leverage and becoming increasingly dependent on foreign powers such as France and Russia to "lead in negotiations with countries seeking to develop enrichment capabilities." *Id.* "Reversing this trend is crucial to preserving U.S. influence in shaping global nonproliferation policy." *Id.*

Aside from military and defense concerns, there are also significant economic and geopolitical interests at stake. Domestic mining comprises just a small fraction of the fuel used in domestic reactors, and the Nation's "nuclear fuel production capacity [is] insufficient for domestic needs." World Nuclear Ass'n, *US Nuclear Fuel Cycle*, *supra*. Indeed, 93% of the uranium purchased by domestic utilities is imported, 32% of which comes from Russia, Kazakhstan, and Uzbekistan. U.S. Energy Info. Admin., *Uranium Marketing Annual Report* (May 31, 2018), https://www.eia.gov/uranium/marketing/.

Because the United States is the world's largest consumer of nuclear energy, The Statistics Portal, *Leading countries in nuclear energy consumption in 2017 (in million metric tons of oil equivalent)*, https://www.statista.com/statistics/265539/nuclear-energy-consumption-in-leading-countries/ (last visited July 20, 2018), the gap between what domestic uranium producers can deliver and what consumers require represents an unrealized domestic economic benefit that is instead exported to countries such as Russia, Kazakhstan, and Uzbekistan.

Industry experts further predict "a significant expansion of global nuclear power," with China, India, and Russia making up nearly 40% of the world's fleet

of nuclear reactors by 2030. Banks & Wallace, *supra*, at 11; *see also* U.S. Energy Info. Admin., *China Expected to Account for More than Half of World Growth in Nuclear Power Through 2040*, TODAY IN ENERGY (Sept. 28, 2016), https://www.eia.gov/todayinenergy/detail.php?id=28132. The expansion of the global nuclear market will likely result in higher fuel costs as domestic owners and operators compete with new foreign entrants. Banks & Wallace, *supra*, at 11.

Notably, in the last five years, five nuclear power plants have shut down for economic reasons. *See* Sonal Patel, *More Premature Nuclear Unit Retirements Loom*, POWER Magazine (Feb. 1, 2018), http://www.powermag.com/more-premature-nuclear-unit-retirements-loom/?pagenum=1. Several other plants have announced early retirement plans in the immediate future, and long before the plants' scheduled license expiration. U.S. Energy Info. Admin., *Fort Calhoun Becomes Fifth U.S. Nuclear Plant to Retire in Past Five Years*, TODAY IN ENERGY (Oct. 31, 2016), https://www.eia.gov/todayinenergy/detail.php?id=28572.

The shuttering of domestic nuclear facilities will force utility companies either to replace lost capacity with alternative sources, such as domestic fossil fuels, or to import electricity from other countries, frustrating national efforts to both reduce foreign energy dependence and to encourage private investment and development of nuclear energy. *Id.*; *see also*, U.S. Energy Info. Admin., *U.S. Nuclear Capacity and Generation Expected to Decline as Existing Generators Retire*, TODAY IN ENERGY (May 12, 2017), https://www.eia.gov/todayinenergy/detail.php?id=31192; *accord* World Nuclear Ass'n, *Nuclear Power in the USA*, http://www.world-nuclear.org/information-library/country-profiles/countries-t-z/usa-nuclear-power.aspx

(last updated June 2018) ("Given that nuclear plants generate nearly 20% of the nation's electricity overall and 63% of its carbon-free electricity, even a modest increase in electricity demand would require significant new nuclear capacity by 2025.").

The dangers of foreign dependency on uranium underscore the need for easier access to domestic uranium in a time of increased global tension. Not only does the near complete reliance on uranium imports deny an economic opportunity for domestic producers, it erodes the United States' ability to ramp up nuclear production or to leverage its uranium supply as a bargaining chip for nonproliferation negotiations. *Amici* support the prudent development of U.S. natural resources to secure U.S. interests and insulate the Nation from undue external influence. Similarly, Congress has expressed a desire to encourage uranium mining while "avoid[ing] dependence on imports." *See* 42 U.S.C. §§ 2296b-3(a), -6(a)–(b).

The White House has also affirmed that domestic access to and prudent development of nuclear materials is a vital component of the Nation's security and also necessary to promote affordable, reliable, and clean energy consumption. *See, e.g.*, Exec. Order No. 13,783, 82 Fed. Reg. 16,093, 16,093–97 (Mar. 28, 2017). Domestic production of energy sources is a key component of this platform. To that end, the President directed agency heads to undertake an immediate review of all existing agency actions that "potentially burden the development or use of domestically produced energy resources, with particular attention to . . . nuclear energy resources." *Id.* at 16,093. A guidance memorandum subsequently issued by the Office of Information and Regulatory Affairs explained that agency actions covered by the executive order included those that: (1) "[a]ffect the design

and/or location of domestic energy production"; (2) "[a]ffect the design and/or location of drilling or mining of energy production resources; and (3) "[l]imit the use of certain sources of energy, such that the development of domestically produced energy resources from a certain sector may be negatively affected." Dominic J. Mancini, Office of Info. & Regulatory Affairs, Exec. Office of the President, M-17-24, *Guidance for Section 2 of Executive Order 13783, Titled "Promoting Energy Independence and Economic Growth"* 2–3 (2017), https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/memoranda/2017/M-17-24.pdf.

In response to Executive Order 13,783, the U.S. Department of Agriculture recommended revising a prior public land order that withdrew certain lands in the Grand Canyon watershed from federal mining laws, noting revision could potentially open the area up to exploration for and mining of uranium. U.S. Dep't of Agric., *Final Report Pursuant to Executive Order 13783 on Promoting Energy Independence and Economic Growth* 9 (Oct. 11, 2017), https://www.fs.fed.us/sites/default/files/eo-13783-usda-final-report-10.11.17.pdf; U.S. Dep't of Agric., *EO 13783 USDA Final Report; Recommendations Sorted by Priority* (Oct. 11, 2017), https://www.fs.fed.us/managing-land/energy.

Declining productivity of domestic nuclear power poses significant strategic risks that threaten national security. Recognizing the need for an effective and uniform policy regarding nuclear development, the Act affirmatively removes certain regulatory decisions from the states and commits them exclusively to the judgment of the Commission to allow the *federal* government to mitigate and remediate many of these risks. A needlessly formalistic approach to

preemption that focuses on the literal text of the statute permits states to second-guess sound federal judgment and undermine national policy through backdoor legislation. Reaffirming the Court's prior holdings that the Act's preemptive scope is informed both by purpose and effect, and not limited by the text of the state statute, would ensure federal policy appropriately carries the day in these strategically critical areas.

D. Uranium Is A Critical And Strategic Mineral Warranting Of Federal Oversight.

The importance of federal control over uranium mineral supplies for national military, economic, and energy purposes was the motivating factor for Congress to first implement federal oversight over uranium development. *See* Anthony J. Thompson & Christopher S. Pugsley, Rocky Mountain Mineral Law Found., 2006 No. 2 RMMLF-Inst. Paper No. 3, *United States Federal / State Licensing / Permitting Regimes Implicated By Uranium Development* (2006). Both the 1946 and 1954 versions of the Act granted the Commission broad and general powers to search for and mine uranium, which was considered to be "in the national interest." *See* Robert S. Palmer, Rocky Mountain Mineral Law Inst., 2 RMMLF-Inst. 4, *Problems Arising Out of Public Land Withdrawals of the Atomic Energy Commission* (1956).

The Defense Production Act of 1950 ("DPA") further provided financial assistance to private enterprise for exploration, development, and mining of critical and strategic metals and minerals, including uranium. *See* Defense Production Act of 1950 (DPA), ch. 932, 64 Stat. 798 (codified as amended at 50 U.S.C. § 4501) (formerly at 50 U.S.C. app. § 2061). The Secretary of the Interior was permitted to withdraw public lands

from purchase or occupation to carry out uranium exploration. Palmer, *supra*, at 1. Once the federal government had surveyed geographic areas for viable uranium deposits, the Commission would award special government contracts to private entities to perform the actual drilling operations. *Id.*

At the time, the federal government was the only legal owner of uranium material. *Atlas*, 895 F.2d at 748. To encourage private enterprise participation in the program, the Commission guaranteed a market for those uranium producers and committed to purchase all of the producers' output. *Id.* at 747, 755. The program was "successful beyond the [g]overnment's highest expectations," causing the Commission to announce significant cutbacks in 1956 to mitigate unforeseen burdens associated with the unlimited purchase commitment. *See* Jon. J. Indall, Rocky Mountain Mineral Law Found., 2006 No. 2 RMMLF-Inst. Paper No. 16, *A Historical Review of the Relationship Between The Federal Government and the Domestic Uranium Industry and Current Uranium Activities and Issues in New Mexico* (2006).

Through the DPA, Congress also conferred upon the Executive Branch an "array of authorities to shape national defense preparedness programs and to take appropriate steps to maintain and enhance the domestic industrial base" to ensure domestic capability to provide essential material, like uranium, in furtherance of national defense. 50 U.S.C. app. § 4502(a)(4) (formerly at 50 U.S.C. app. § 2062(a)(4)). The DPA extends the executive's power to domestic preparedness, response, and recovery against natural disasters, terrorist attacks, and other national emer-

gencies.[8] Jared T. Brown & Daniel H. Else, Cong. Research Serv., R43767, *The Defense Production Act of 1950: History, Authorities, and Considerations for Congress* (2014).

Exclusive federal ownership over uranium ended in 1964, with the passage of the Private Ownership of Special Nuclear Materials Act ("1964 Ownership Act"). The 1964 Ownership Act permitted private ownership of uranium as well as the sale of uranium to private entities. *See* Private Ownership of Special Nuclear Materials Act, Pub. L. No. 88-489, 78 Stat. 602 (1964) (codified as amended in scattered sections of 42 U.S.C.). In releasing the federal government's monopsony on uranium, Congress recognized the value of private enterprise in assuring a ready and robust uranium supply for both the United States military in addition to other security needs. *See* S. Rep. No. 88-1325, at 17 (1964) ("*1964 Report*") ("It is the committee's view that the measures taken in this bill to assure the viability of the domestic uranium industry are in the *national* interest since this industry is closely related to our vital *defense* and *security* interests.") (emphases added).

The 1964 Ownership Act further encouraged the private development and investment of domestic uranium by requiring the Commission to deny uranium enrichment services for foreign-source uranium "to the extent necessary to assure the maintenance of a viable domestic uranium industry." 42 U.S.C. § 2201(v)(B)(iii) (1988). At this time, the Commission was the only entity capable of enriching natural uranium for use in nuclear reactors and it issued sup-

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[8] The President has delegated these powers to department and agency heads. *See* Exec. Order No. 13,603, 77 Fed. Reg. 16,651 (Mar. 16, 2012).

plemental guidance stating that it would not enrich any foreign-source uranium for domestic use. *See* 31 Fed. Reg. 16,479 (Dec. 19, 1966). However, the Commission amended its position in 1974 and the restrictions on foreign-source uranium were gradually phased out. *See* 39 Fed. Reg. 38,016 (Oct. 21, 1974). In 1983, Congress reaffirmed the Commission's responsibility for monitoring and assessing the viability of the domestic uranium industry. *See* Hackney, *supra*, at 181 (citing 42 U.S.C. § 2011 (1982)).

To this day, the federal government continues to show a special interest in the domestic production and procurement of uranium. Recognizing that "the United States is heavily reliant on imports of certain mineral commodities that are vital to the Nation's security and economic prosperity," the White House issued Executive Order 13,817, titled "A Federal Strategy To Ensure Secure and Reliable Supplies of Critical Minerals." Exec. Order No. 13,817, 82 Fed. Reg. 60,835, 60,835 (Dec. 20, 2017). Concerned that the "dependency . . . on foreign sources creates a strategic vulnerability for both [the United States'] economy and military to adverse foreign government action, natural disaster, and other events that can disrupt supply of these key minerals," the Executive Order encouraged "[a]n increase in private-sector domestic exploration, production, recycling, and reprocessing of critical minerals." *Id.*

Pursuant to this Executive Order, the Department of the Interior classified uranium as one such "critical mineral" that is "essential to the economic and national security of the United States." Exec. Order No. 13,817, 82 Fed. Reg. 60,835, 60,835 (Dec. 20, 2017); *see also* U.S. Dep't of the Interior, Final List of Critical Minerals 2018, 83 Fed. Reg. 23,295 (May 18, 2018). Three crucial features qualify uranium as a

"critical mineral": (1) it is "essential to the economic and national security of the United States"; (2) "the supply chain . . . is vulnerable to disruption"; and (3) it "serves as an essential function in the manufacturing of a product, the absence of which would have significant consequences for our economy or our national security." Exec. Order No. 13,817, 82 Fed. Reg. 60,835, 60,835 (Dec. 20, 2017). The purpose of the "critical minerals" list is to facilitate the creation of a national, multi-agency effort to reduce foreign reliance on uranium and promote access to domestic supply of uranium in both the immediate short term and going forward. USGS, *Interior Releases 2018's Final List of 35 Minerals Deemed Critical to U.S. National Security and the Economy* (May 18, 2018), https://www.usgs.gov/news/interior-releases-2018-s-final-list-35-minerals-deemed-critical-us-national-security-and.

As recognized by this Court, the federal government has long exercised monopsony-like power to influence uranium production in the name of national interest. *See, e.g., Huffman v. W. Nuclear, Inc.*, 486 U.S. 663 (1988).

* * *

Uranium will "never be wrestled completely free from military and political exigencies." James R. Wilch, Comment, *GATT and the Half-Life of Uranium Industry Protection*, 10 N.W. J. INT'L L. & BUS. 150, 192 (1989). As Congress has previously observed:

> [T]he Government's inventories of source and special nuclear materials represent a precious national asset. Unlike other materials which are perishable . . . the uranium inventory represents a vast nonperishable asset with intrinsic value in

> units of usable energy. Wisely managed, it can contribute to the common defense and security and to the welfare of the Nation."

1964 Report at 3122. In preempting the field of nuclear safety, Congress determined that the federal government was best positioned to balance the need for domestic production and development of nuclear material against the radiological hazards attendant to those activities. Uranium's importance to numerous national strategic interests underscores courts' responsibility to zealously guard federal policy from state obstruction.

Here, Virginia has enacted a blanket prohibition on uranium mining due to concerns about the radiological hazards of post-mining activities—activities committed exclusively to the Commission's regulatory authority. To prevent state subversion of a critical national policy, the Court should reaffirm that the Act's preemptive scope turns on the purpose and effect of a state's statute, even when, as here, the text of the statute purports to regulate activities appropriately within the state's jurisdiction.

CONCLUSION

For the foregoing reasons, the Court should reverse the Fourth Circuit's decision.

Respectfully submitted,

GORDON D. TODD *
KIMBERLY A. LEAMAN
T.J. HERRON
SIDLEY AUSTIN LLP
1501 K Street, N.W.
Washington, D.C. 20005
(202) 736-8000
gtodd@sidley.com

Counsel for Amici Curiae

July 26, 2018

* Counsel of Record

No. 16-1275

IN THE

Supreme Court of the United States

VIRGINIA URANIUM, INC., ET AL.,

Petitioners,

v.

WARREN, ET AL.,

Respondents.

On Writ of Certiorari to the United States Court of Appeals for the Fourth Circuit

BRIEF OF ENTERGY OPERATIONS, INC. AND ENTERGY NUCLEAR OPERATIONS, INC. AS *AMICI CURIAE* IN SUPPORT OF PETITIONERS

MARCUS V. BROWN
WILLIAM B. GLEW, JR.
ENTERGY SERVICES, INC.
639 Loyola Avenue
New Orleans, LA 70113

TIMOTHY A. NGAU
ENTERGY SERVICES, INC.
1340 Echelon Parkway
Jackson, MS 39213

KATHLEEN M. SULLIVAN
Counsel of Record
SANFORD I. WEISBURST
ELLYDE R. THOMPSON
QUINN EMANUEL URQUHART & SULLIVAN, LLP
51 Madison Ave., 22nd Fl.
New York, NY 10010
(212) 849-7000
kathleensullivan@quinnemanuel.com

Counsel for Amici Curiae Entergy Operations, Inc., and Entergy Nuclear Operations, Inc.

July 26, 2018

WILSON-EPES PRINTING CO., INC. – (202) 789-0096 – WASHINGTON, D. C. 20002

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INTEREST OF AMICI CURIAE[1]

Entergy Nuclear Operations, Inc. and Entergy Operations, Inc. (together, "Entergy") hold licenses issued by the U.S. Nuclear Regulatory Commission ("NRC") to operate nuclear power plants in seven States: Arkansas, Louisiana, Massachusetts, Michigan, Mississippi, New York, and Vermont. These plants collectively employ approximately 6,000 professionals, and those that remain in operation generate nearly 9,000 megawatts of power annually. As an NRC license-holder, Entergy must comply with expansive NRC regulations governing every aspect of nuclear power generation—from construction to decommissioning.

Entergy has been subjected to state regulation of these plants motivated by a radiological safety purpose and hence federally preempted under the majority approach in the lower courts. Such regulation has put Entergy (and other similarly situated licensees) in the difficult position of either challenging the regulations as preempted or complying with the state regulation (often at great cost). Because Entergy operates nuclear facilities in multiple States, it has a particular interest in ensuring that nuclear facilities are not impermissibly saddled with radiological safety-motivated state

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[1] Pursuant to Rule 37.3, the parties have consented to the filing of this brief. Letters of consent have been filed with the Clerk. No counsel for any party authored this brief in whole or in part, and no counsel or party made a monetary contribution intended to fund the preparation or submission of this brief. No person other than *amici curiae* made a monetary contribution to its preparation or submission.

regulations in light of the already comprehensive NRC scheme.

INTRODUCTION AND SUMMARY OF THE ARGUMENT

The question before the Court is whether the Atomic Energy Act ("AEA") preempts a State from regulating in its otherwise permissible sphere when the State does so for the purpose of regulating radiological health and safety. Virginia is not alone in burdening nuclear power generation by using facially legitimate state authority as a pretext for regulating radiological safety. As described below, numerous States have taken actions imposing costly and unnecessary radiological safety-based regulation on every phase of the nuclear generation cycle, including construction, operation, storage of spent nuclear fuel ("SNF"), and decommissioning. And the lower courts have properly looked behind the face of those efforts to their true purpose and readily found them preempted.

For example, States previously have attempted to impose the following facially neutral regulations, where the evidence showed that the State's true purpose was to regulate radiological safety: (1) requiring legislative approval for a nuclear power plant that had operated for decades to continue operating pursuant to its NRC license; (2) imposing a $5 million fee for consideration of an application to build an SNF storage facility; (3) requiring a $15 million payment for the ability to construct and move SNF to a dry cask storage facility; and (4) enacting a prohibition punishable as a misdemeanor on any person role-playing a county official for purposes of emergency planning. In all of these examples, the

regulations on their face fell within the traditional realm of state authority. And yet, in each of these examples, clear evidence showed that the State's motivating purpose was a concern about radiological safety, resulting in their preemption.

Even when this type of regulation does not result in complete elimination of the nuclear activity within the borders of the State, as it does in the instant case, nuclear plant owners and operators can be subject to what the Federal Circuit has referred to as "blackmail" as a condition of performing activities properly subject to the jurisdiction of the NRC. NRC licensees must consider whether to challenge such improper regulation in costly litigation or comply with the regulation as a business expense. In this manner, a State's ability to impose costs through improper legislation or regulation is one tool that local politicians use to stunt and even eliminate America's nuclear power production in clear violation of federal law and policy. For this reason, the AEA preemption framework should, as the majority of lower courts have held, require an inquiry into the purpose behind state and local laws and regulatory actions. This does not leave States remediless; they are free to bring their nuclear safety concerns to the NRC's attention, and they are barred only from engaging in direct regulation based on their concerns.

Amici do not repeat Petitioners' arguments on the scope of AEA preemption. Rather, they describe several past examples where States have acted from a radiological-safety purpose and discuss the practical costs that those regulations imposed before they were successfully challenged.

ARGUMENT

I. THE LOWER COURTS HAVE PROPERLY HELD PREEMPTED ATTEMPTS OF CERTAIN STATES TO INTERFERE WITH FEDERAL AUTHORITY OVER NUCLEAR SAFETY UNDER THE GUISE OF PERMISSIBLE STATE REGULATION

Nuclear power provides low-cost energy with little to no greenhouse gas emissions. It is an important source of domestic energy, enabling Americans to reduce reliance on fossil fuels, and an important tool in maintaining the reliability of the United States power grid. In the United States, the NRC regulates radiological health and safety through all phases of nuclear power generation, pursuant to the AEA. As this Court has held, "the federal government has occupied the entire field of nuclear safety concerns, except the limited powers expressly ceded to the states." *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n* ("*PG&E*"), 461 U.S. 190, 212 (1983). This Court has "defined the pre-empted field, in part, by reference to the motivation behind the state law." *English v. Gen. Elec. Co.*, 496 U.S. 72, 84 (1990).

Despite the clear language of the AEA, Congress' clear expression of its intent to occupy the field of nuclear safety, and this Court's holdings, some States have sought to regulate nuclear facilities based on radiological safety concerns throughout the lifecycle of nuclear power generation in a manner inconsistent with federal law and policy. Contrary to the result reached below by the Fourth Circuit, it is entirely appropriate—and indeed, necessary—for courts to inquire into the purpose behind state actions affecting

nuclear power generation in order to determine whether they are preempted. Time and again, the lower courts have properly determined that state action, although facially permissible, was undertaken for an impermissible radiological safety purpose and hence invaded the field exclusively regulated by the NRC.

A. The Lower Courts Have Invalidated State Laws Whose Facial Neutrality Was Found Pretextual For A Purpose To Regulate For Radiological Safety

1. Vermont

In *Entergy Nuclear Vermont Yankee, LLC v. Shumlin*, 838 F. Supp. 2d 183 (D. Vt. 2012), *aff'd in relevant part*, 733 F.3d 393 (2d Cir. 2013), both the district court and the Second Circuit held invalid as preempted a Vermont law found to be aimed at regulating radiological safety. The Vermont Yankee Nuclear Power Plant ("Vermont Yankee") had operated for more than 30 years when, in advance of applying to the NRC for a license renewal for a new term of operation, the Vermont legislature passed a law requiring State approval for continued operation. In 2002, Entergy Nuclear Vermont Yankee, LLC ("ENVY"), had purchased the plant, making clear at the time that it would seek to increase the generation capacity of the plant, construct a dry cask storage facility,[2] and seek the NRC's approval to operate the

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[2] The fuel rods used to power the reactor are stored in deep pools of treated water after they have been used. These rods can be moved into sealed metal cylinders on a concrete pad, known

plant beyond the March 2012 date in its original NRC operating license. *Entergy Nuclear*, 838 F. Supp. 2d at 191.

After approving the sale of Vermont Yankee to ENVY from the prior state-utility owners, the Vermont State government sought to thwart continued operation of the plant. First, although a state law banning SNF storage had a carve-out for the owners of the nuclear plant, the attorney general interpreted that provision not to apply to ENVY but only to the prior owners. *Entergy Nuclear*, 838 F. Supp. 2d at 194. Next, the Vermont legislature passed two bills, known as Act 74 and Act 160, that effectively gave the Vermont legislature a pocket veto over continued operation of the plant, requiring the legislature to pass a bill affirmatively allowing continued operation. *Id.* at 189. Then, to assist in implementation of Acts 74 and 160, the legislature passed Act 189, which required what it termed a "reliability" assessment of the plant but which in fact called for state investigation into crucial radiological safety systems at the plant. *Id.* at 212-13. At each turn, Vermont legislators sought, in the remarkably candid words of one committee member, to "find another word for safety," *id.* at 203, 229, such that the State could regulate radiological safety under the guise of permissible state activity. ENVY and Entergy Nuclear Operations, Inc. ("ENOI," the NRC-licensed operator for the plant) sued, the district court enjoined the relevant state laws as preempted, and

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as dry casks, for long-term storage. *Entergy Nuclear*, 733 F.3d at 400 n.7.

the Second Circuit affirmed. *Entergy Nuclear*, 733 F.3d at 398.

As to SNF storage, the legislative history made clear that legislators opposed, on radiological safety grounds, any sort of enactment that would permit construction of a dry cask storage facility. *Entergy Nuclear*, 838 F. Supp. 2d at 195. Indeed, the district court detailed how "more than a dozen witnesses testif[ied] regarding their safety concerns surrounding spent fuel storage." *Id.* Legislators raised these safety concerns even though an expert witness hired by the legislative counsel had advised them that "a lot of the concerns that citizens have are concerns that you can't address *directly* the way they want them to be addressed." *Id.* (emphasis added). One legislator, for example, suggested that a concern about the safety of a dry cask storage facility could be rooted in the need for "some money" because, "if the federal government or Entergy doesn't protect it, we're going to have to do it because we are not going to let our citizens . . . blow up." Another asked whether there might be a "creative use of statute," whereby "someone might have a safety issue in mind," but instead invoke the aesthetic interest in shielding "the visible impact of these casks from the river." *Id.* Indeed, the district court noted that "[o]ther references to safety by legislators and witnesses are too numerous to recount." *Id.*

Ultimately, the legislature passed Act 74, which compelled ENVY to seek approval from the state public utility commission to construct the dry cask storage facility and, as a condition of its passage, required ENVY to agree to deposit more than $15 million into a Clean Energy Development Fund. *Id.*

at 200. The bill incorporated a memorandum of understanding ENVY and ENOI had entered into with the State that imposed numerous conditions governing radiological health and safety. *Entergy Nuclear*, 733 F.3d at 402.[3] Yet the legislative enactment still required ENVY to obtain legislative approval for storage of SNF generated after the original license term. *Entergy Nuclear*, 838 F. Supp. 2d at 197.

The battle over SNF storage promptly led to one over the continued operation of the Vermont Yankee plant itself. *Id.* at 202. Again, legislators evinced a belief that the NRC would not protect sufficiently the safety of Vermont residents and sought to act based upon nuclear safety concerns. *Id.* at 202-07. Comments on the bill requiring state approval of continued plant operation linked safety to reliability and economics—a plant shut down for nuclear safety reasons could not provide power or economic benefit to the State. *Id.*

These themes echoed throughout the legislature's consideration of the bill, and legislators again sought

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[3] The conditions included that the SNF storage pad be located "at least one hundred feet from a floodplain, space the storage casks to permit access to individual casks 'to the greatest extent possible,' configure the spent-fuel pool so that high-decay heat assemblies are surrounded by low-decay heat assemblies, perform temperature monitoring and monthly manual radiation surveillance of the storage casks and report the results to the [Vermont state agency], not store waste generated outside Vermont on site, remove 'high level' spent nuclear fuel from Vermont 'as quickly as possible,' and conduct a study addressing the stability of the proposed new spent nuclear fuel storage facility based upon a stated concern that an adjacent river bank might erode and collapse." *Entergy Nuclear*, 733 F.3d at 402.

to clothe their safety concerns in non-safety terms by "find[ing] another word for safety." *Id.* at 203. As the bill progressed, legislators cautioned one another to speak in terms of economic benefit or reliability—because "we don't say safety when we're talking Vermont Yankee in this room." *Id.* at 206. As enacted, Act 160 required legislative approval for operation of the Vermont Yankee plant after March 2012. *Id.* at 210.

Once Act 160 was enacted, the legislature introduced a bill to provide for a comprehensive assessment of the Vermont Yankee plant. *Id.* The bill originally was titled "An Act Relating to an Independent Safety Assessment of the Vermont Nuclear Facility," and called for "an independent safety assessment" of the Vermont Yankee plant. *Id.* As the legislature considered the bill, "'[s]afety' was either replaced with 'operating,' 'operational,' or 'emergency,' or omitted altogether" but otherwise "little change[d] to the substance of the bill." *Id.* at 211. Notwithstanding these "editorial" revisions, and a change of the title to refer to a "Vertical Audit and Reliability Assessment," the legislators still referred to it as a safety study. *Id.* at 211-12 ("I support the review of the safety of Vermont Yankee."). As a senator introducing the bill explained: "[W]hat this bill does, in essence, is the governor has called for an independent safety assessment, the congressional delegation has called for an independent safety assessment, the Legislature has talked about the need to do something. What this bill does is define what we mean by an assessment. And we talk about a reliability assessment because safety is not within our purview." *Id.* at 212 (alteration in original).

The bill passed and became Act 189, leading to a years-long study of the Vermont Yankee plant that included analyzing systems crucial to the safe generation of nuclear power that are subject to exclusive NRC regulation. *Id.* at 212-13. The 300-page study concluded the plant was "operated reliably." *Id.* Nonetheless, the legislature never voted to approve continued operation of the Vermont Yankee plant. *Id.* at 215-16. Rather, ENVY and ENOI filed suit, 11 months before expiration of their NRC license. *Id.* at 217.

After examining this legislative history in detail, the district court noted that, although "'a legislature's stated reasons will generally get deference,' a Court cannot be 'so naive' in its purpose inquiry to accept 'any transparent claim.'" *Id.* at 228 (quoting *McCreary County v. ACLU of Ky.*, 545 U.S. 844, 863-64 (2005)). "Inquiry into the legislative history of Act 160 is particularly important here, where there is evidence the statute was motivated by and grounded in radiological safety concerns, and the statute on its face empowers future legislatures to apply the statute to deny continued operation for radiological safety reasons and evade review." *Id.* The district court thus concluded that "concerns regarding the radiological safety of Vermont Yankee were a primary motivating force for giving the legislature the power to take no action" and thereby disallow continued operation. *Id.* at 229. "[R]eferences, almost too numerous to count . . . reveal legislators' radiological safety motivations and reflect their wish to empower the legislature to address their constituents' fear of radiological risk, and beliefs that the plant was too unsafe to operate . . . ." *Id.* Beyond that, Act 160

lacked a plausible non-safety purpose, a consideration that, even apart from explicit mentions of safety in the legislative record, demonstrated circumstantially that the law was motivated by safety concerns. *Id.* at 229-30.

Likewise, the district court found Act 74, related to SNF storage, preempted because "the legislature's desire and intent to regulate the radiological safety of dry cask storage is crystal clear." *Id.* at 231. Thus, even though the laws at issue had been largely scrubbed of any safety language, the legislative record left no doubt that the legislature had acted based on radiological safety concerns.

The Second Circuit affirmed in relevant part. *Entergy Nuclear*, 733 F.3d at 398. Reasoning that this Court has "defined the preempted field, in part, by reference to the motivation behind the state law" in analyzing preemption under the AEA, the Second Circuit "agree[d] with the district court's careful analysis of the legislative intent motivating Vermont's enactment of Act 160 insofar as the district court identified radiological safety as the Vermont legislature's primary purpose in enacting the statute." *Id.* at 419-20 (internal quotation marks omitted).[4]

2. New York

The Second Circuit had issued a similar ruling nearly thirty years earlier concerning safety-based regulation by New York's Suffolk County of the Shoreham Nuclear Plant. As construction of the plant

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[4] Following nearly a decade of disputes, the Vermont Yankee plant announced in 2012 its intention to shut down at the end of 2014 for economic reasons.

neared completion, Suffolk County filed suit against the plant's owner, Long Island Lighting Co. ("LILCO"), bringing an array of state-law claims. *Suffolk County v. Long Island Lighting Co.*, 554 F. Supp. 399, 402 (E.D.N.Y. 1983), *aff'd*, 728 F.2d 52 (2d Cir. 1984). The County alleged that construction defects had caused the cost of constructing Shoreham to balloon and that certain costs would be passed onto ratepayers, and sought damages related to the state-law claims. *Id.* at 402-03. But its complaint pointed to design and construction problems, including those that allegedly failed to comply with AEA regulations, and sought as a remedy an inspection and suspension in operation. *Id.* at 402-03. Although the County purported to base its claims on facially permissible concerns about cost overruns during construction, the district court held that the County had used this cost overrun concern as a pretext for its true purpose—namely, to impose additional safety inspections and regulations on the Shoreham plant. *Id.* at 405.

The Second Circuit affirmed, rejecting the County's argument that the AEA "does not preempt its tort and contract claims because those claims are not directed at radiological safety hazards—an area concededly reserved to the NRC—but rather at the 'pocketbook' issue of unreasonable and excessive cost." 728 F.2d at 56. The Second Circuit explained that "safety concerns pervade the complaint." *Id.* at 59. Beyond the safety concerns animating the complaint, the County impermissibly sought to invade the NRC's exclusive regulatory authority. *Id.* The Second Circuit thus concluded that Suffolk County's "only avenue . . . is to continue its proceedings in the administrative forum—the NRC

for safety-related concerns and the [New York State Public Service Commission] for economic claims." *Id.* at 64.

Undeterred by this unsuccessful lawsuit, Suffolk County withdrew from emergency response planning to prevent Shoreham from complying with NRC regulations requiring local government participation in such planning. *Long Island Lighting Co. v. Suffolk County*, 628 F. Supp. 654, 659 (E.D.N.Y. 1986). When the NRC appeared prepared to allow Shoreham special dispensation to move toward operation without such local participation, the Suffolk County legislature used its police power to enact a local law that criminalized participation in a test of the emergency plan involving simulation of local government roles. *Id.* at 659. Violation of the local law was a misdemeanor, punishable by a year in jail and $1,000 fine. *Id.*

With a proposed test of the emergency plan weeks away, LILCO sued Suffolk County, seeking to enjoin application of the local law as preempted. *Id.* at 660. The district court held not only that the Suffolk County law "impermissibly interferes with a preempted federal area," but also that by "failing to articulate a non-safety rationale, Suffolk County impermissibly intruded into a federally preempted area when it enacted" the law. *Id.* at 665. Despite the fact that States and local governments retain *some* authority with respect to nuclear power plants, *id.*, the district court could not ignore the fact that "[t]he County is on record . . . as opposing the opening of the Shoreham facility on the grounds that no emergency evacuation plan is safe for Suffolk County." *Id.* Thus, because the County passed the law "in an attempt to

continue its opposition to the Shoreham facility on the basis of a perceived radiological hazard," the court concluded that the County had "impermissibly intruded into a sphere of authority reserved exclusively to the federal government by Congress." *Id.* at 666.

In the end, the Shoreham Nuclear Plant never commenced commercial operation due to the dispute over the evacuation plans. Ultimately, LILCO settled with the State of New York in 1989, and billions of dollars in ultimately unnecessary construction costs were funded by the ratepayers.[5]

B. The Lower Courts Also Have Invalidated Pretextual Efforts To Regulate Storage And Disposal Of Nuclear Materials

Certain States also have exercised facially permissible authority to impermissibly regulate the transportation, storage, and management of SNF and other radiologically contaminated materials based on nuclear safety concerns. In this area too, lower courts have found that state action is preempted by federal law.

1. Utah

In 1997, a company named Private Fuel Storage began to lease Skull Valley reservation tribal land in order to build an SNF storage facility. *Skull Valley Band of Goshute Indians v. Nielson*, 376 F.3d 1223, 1228 (10th Cir. 2004), *cert. denied sub nom., Nielson v. Private Fuel Storage, L.L.C.*, 546 U.S. 1060 (2005)

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[5] *See* Dan Fagin, *Lights Out at Shoreham*, Newsday (Nov. 30, 2007), https://bit.ly/2v3ZLcR.

The company applied for a spent fuel storage license to the NRC. *Id.*

In the years that followed, Utah enacted a complicated web of state regulations to discourage and to forestall any SNF from being transported or stored in Utah. *See id.* In essence, Utah enacted laws that made the Skull Valley project impossible and the cost associated with even pursuing a license prohibitive.

First, Utah passed a new law prohibiting the transfer, storage, treatment, or disposal of high-level nuclear waste in the State. *Id.* It also provided that the governor, along with county officials and the state legislature, could separately approve an SNF storage facility if a license was issued by the NRC and upheld by a court. *Id.* at 1228-29. The law required state licensing by the Department of Environmental Quality, including an onerous application process. *Id.* at 1229. The State's Department of Transportation had the authority to approve any transportation of SNF. *Id.* Further, the law required substantial fees in order to apply for and obtain a license to manage SNF in Utah, including a non-refundable *application fee* of $5 million and coverage for 75% of unfunded potential liabilities, potentially in the hundreds of millions or billions of dollars. *Id.* The law also revoked limited liability protections for SNF storage facilities, placing the owners and operators at personal risk, a requirement otherwise unheard of in Utah's corporate governance laws. *See id.*

Second, the Utah legislature empowered county officials to reject all proposals for storing or transporting SNF, or to enact a comprehensive land use plan for health and general well-being if any SNF

work was approved. *Id.* at 1229-30. Additionally, county governments were barred from providing municipal services to SNF facilities, including fire, garbage, water, sewer, and electricity, among others. *Id.* at 1230.

Finally, Utah departed from its general policy of allowing the Department of Transportation to regulate rail crossings in favor of a requirement that any dispute regarding an SNF facility's use of rail crossings be administered only after agreement of the governor and legislature. *Id.* Utah also designated additional roads statewide as public safety interest highways, thereby allowing the Department of Transportation to control those roads, divested the county of control over the access road to the proposed facility, and required gubernatorial and legislative agreement before eminent domain could be used for an SNF company. *Id.*

In 2001, after nearly four years of this expanding web of laws and regulations, Skull Valley Band filed suit, alleging that Utah had overstepped the bounds of its police power in enacting laws designed to frustrate the establishment of an SNF facility based on nuclear safety concerns. *Skull Valley Band of Goshute Indians v. Leavitt*, 215 F. Supp. 2d 1232, 1238 (D. Utah 2002). The district court granted summary judgment to Skull Valley Band, ruling, *inter alia*, that, while Utah normally has every right to regulate the traffic on its roads, it may not do so for an impermissible nuclear safety purpose. *Id.* at 1249 (concluding that the road restrictions "directly and substantially affect the decisions made by those who build or operate nuclear facilities concerning

radiological safety levels and fall within the pre-empted field").

The Tenth Circuit affirmed, holding that "a state cannot use its authority" in traditional areas of regulation "as a means of regulating radiological hazards." 376 F.3d at 1248. The court noted that, among other things, a $5 million application fee for a license to manage SNF, untethered to any costs the State would bear in processing the application, laid bare the motivating purpose of nuclear safety. *See id.* at 1246.

2. Washington, Kentucky, Maine, and Connecticut

Other cases similarly illustrate that some States have used facially legitimate state authority as a way to regulate storage and disposal of radioactive materials based on radiological safety concerns.

For instance, in *United States v. Manning*, 527 F.3d 828 (9th Cir. 2008), the Ninth Circuit held preempted Washington's "Cleanup Priority Act," a law enacted based on a ballot initiative that concerned the treatment of mixed waste. The law related to the Hanford Nuclear Reservation within the State, a facility operated by the Department of Energy that served as a treatment, storage, and disposal site for radioactive and non-radioactive hazardous waste. *Id.* at 830-31. Washington residents had voted on a ballot measure "to prevent the addition of new radioactive and hazardous waste to the Hanford nuclear reservation until the cleanup of existing contamination is complete." *Id.* at 831 (internal quotation marks omitted).

The United States Government challenged the law as preempted, and the district court and Ninth Circuit both agreed that it was. *Id.* While the State could regulate the non-radioactive hazardous components of mixed waste, in this instance, the law's policy section revealed as its purpose that it was "the State's intent to regulate radioactive safety." *Id.* at 837 (noting law described "Hanford as a dump for 'radioactive and/or hazardous or toxic wastes'" and "warn[ed] that Washington's economy could be harmed 'from any accident releasing radiation'"); *United States v. Manning*, 434 F. Supp. 2d 988, 1003 (E.D. Wa. 2006) ("[T]he true aim of the [law] is not the hazardous waste component of mixed waste, but rather the radioactive component."). Thus, the Ninth Circuit held that "[a] key purpose of the CPA is to regulate the radioactive component of mixed waste, as well as the nonradioactive component, for health and safety reasons. Accordingly, the CPA is preempted by the AEA." *Id.* at 839.

In *United States v. Commonwealth of Kentucky*, 252 F.3d 816, 824 (6th Cir. 2001), *cert. denied sub nom., Kentucky Natural Resources & Environmental Protection Cabinet v. United States*, 534 U.S. 973 (2001), the Sixth Circuit rejected Kentucky's attempt to regulate radioactive waste through permitting conditions for the disposal of solid waste. Kentucky sought to prohibit a uranium enrichment facility owned by the Department of Energy from disposing of "[s]olid waste that exhibits radioactivity above de minimis levels." *Id.* at 820. The Sixth Circuit noted that "the AEA preempts any state attempt to regulate materials covered by the Act for safety purposes." *Id.* at 823. The conditions sought to limit "the amount of

'radioactivity' and 'radionuclides' that DOE may place in its landfill" and "impose these conditions to protect human health and the environment." *Id.* Thus, although the AEA does not regulate all solid waste, Kentucky was preempted from regulating the radioactive component of solid waste because the permit conditions "regulate materials covered by the AEA based on . . . safety and health concerns." *Id.*

In both the Washington and Kentucky cases, the courts determined that an impermissible nuclear safety purpose preempted the regulations even though the States facially regulated materials under their authority and the AEA did not authorize the NRC to regulate such materials. *Manning*, 527 F.3d at 836 ("Unquestionably, the State has the authority to regulate nonradioactive hazardous materials."); *Commonwealth of Kentucky*, 252 F.3d at 822 (noting that, under the applicable regulatory scheme, "state and local governments will play a lead role in solid waste regulation").

Even when the lower courts have rejected challenges to such State laws, they have inspected the purpose behind the laws, and sent warning signals to States to stay within the permissible realm of their non-preempted police power authority. For instance, in *Connecticut Yankee Atomic Power Co. v. Haddam Planning & Zoning Commission*, 2001 WL 1898262, at *3 (D. Conn. Apr. 23, 2001), *aff'd* 19 F. App'x 21 (2d Cir. 2001), the owners of the Connecticut Yankee nuclear plant sought to enjoin as preempted a zoning regulation that had changed the zoning of the plant to residential after the plant's construction. When Connecticut Yankee—which already had operated for decades and had started decommissioning—sought

approval to re-zone the property to industrial to allow it to construct a dry cask storage facility, its zoning application was denied. *Id.* Although the local official had "publicly stated that the Town would seek to preclude implementation of the planned dry cask storage system regardless of the outcome of the Zoning proceeding," the district court required Connecticut Yankee to seek a building permit to begin construction on the dry cask storage facility before the court would address the preemption question. *Id.* at *4. Nonetheless, the district court noted that the preemption argument was strong, and likely would succeed if the State thwarted Connecticut Yankee's ability to build the dry cask storage facility. *Id.* at *4 n.1.

In *Maine Yankee Atomic Power Co. v. Bonsey*, 107 F. Supp. 2d 47 (D. Me. 2000), the district court likewise cautioned Maine against a nuclear safety-motivated use of its facially legitimate state authority. Maine's Site Law required approval of the construction or operation of "any development of state or regional significance that may substantially affect the environment." *Id.* at 49. Although the law had not existed at the time the plant was constructed, Maine asserted that the law applied to the nuclear power plant during its decommissioning, specifically to construction of the dry cask storage facility. *Id.* The owners of Maine Yankee challenged the application of the Site Law to the plant, but the district court held the law could apply to the extent Maine used it to regulate "for purposes other than protection against radiation hazards." *Id.* at 54. Still, the district court admonished the State to stay within its permissible sphere, in light of the fact that "[o]ne

might take a hint from the Board's apparent interest in matters nuclear—its demand for the safety report on the proposed storage system for example," that it intended to regulate for a radiological purpose. *Id.* In this same vein, the State "cannot employ a 'financial capacity' requirement to indirectly regulate in the field of spent nuclear fuel storage." *Id.* at 55.

While the State had not yet exceeded its authority, the district court clearly signaled that it would grant the appropriate relief if Maine did overreach: "Perhaps the state's conduct of its administrative proceedings will reveal a transparent effort to exercise regulatory authority reserved to the federal government. Perhaps not. Time will tell. If so, declaratory and injunctive relief will surely and swiftly follow." *Id.* at 56.

C. A State's Imposition Of Financial Requirements On Decommissioning Is Preempted When Imposed For The Purpose of Nuclear Safety

A preemption challenge to a State's attempts to regulate decommissioning on an "economic" basis also has been successful when the evidence showed that the State's true purpose stemmed from a nuclear safety concern.

In 1981, the owners of the Maine Yankee nuclear plant sought approval from FERC to adjust its rates to reflect the costs of decommissioning the plant. *Me. Yankee Power v. Me. Pub. Util.*, 581 A.2d 799, 800 (Me. 1990). While the FERC proceeding was pending, the Maine legislature enacted the Nuclear Decommissioning Financing Act ("NDFA"). *Id.* The NDFA required any nuclear plant operator to file a

decommissioning plan with the Maine Public Utilities Commission ("MPUC") for review and approval and established decommissioning financing requirements. *Id.* Shortly thereafter, Maine Yankee reached a settlement with FERC to establish a decommissioning financing plan, and Maine Yankee submitted the plan to MPUC under the NDFA, which eventually was approved in 1983. *Id.* at 801-02.

In 1988, FERC permitted Maine Yankee to adjust its decommissioning financing plan. *Id.* at 802. Maine Yankee again moved that the MPUC approve the amendment to the plan, but the MPUC rejected the amendment. *Id.* Maine Yankee appealed MPUC's decision and challenged the constitutionality of the NDFA. *Id.* Although the MPUC attempted to justify its decommissioning regulations as economic in nature and thus outside of the purview of the NRC and the AEA, this argument failed. *Id.* at 805.

The Maine Supreme Court, following this Court's decision in *PG&E*, reasoned that, "[b]ecause Congress has clearly manifested an intent to maintain 'complete control over the safety and nuclear aspects of energy generation,'" the NDFA was preempted by the AEA. *Id.* at 805-06 (quoting *PG&E*, 461 U.S. at 212). This was so even though the State had purportedly targeted the NDFA at the economic impact of decommissioning nuclear facilities. Initially, the court explained that, even if "regulatory actions may have an economic impact," it "does not mean that they lie outside NRC's jurisdiction." *Id.* at 805 (quoting 53 Fed. Reg. 24018-01, 24073). In addition, looking to the legislative history of the NDFA, it was clear that the State sought to regulate safety aspects of nuclear decommissioning. *Id.* The

NDFA was enacted, in part, because "timely proper decommissioning of any nuclear power plant . . . is essential to protect public health, safety, and the environment." *Id.* (alteration in original). The court concluded that any attempt to regulate decommissioning is preempted if it impermissibly infringes the NRC's exclusive regulatory authority regarding the safety aspects of nuclear decommissioning, regardless of how the state legislature frames the regulation. *Id.* at 805-06.

II. STATE REGULATION OF RADIOLOGICAL SAFETY IS COSTLY AND UNNECESSARY GIVEN THE NRC'S COMPREHENSIVE REGULATIONS

When States regulate the nuclear field in an effort to address safety concerns, they not only intrude upon an exclusive federal sphere but also impose inefficiencies and costs that can be prohibitive. When States make pretextual forays into the regulation of the nuclear industry, the owners and operators are forced to undertake additional expense to comply with such regulations or else to challenge them. Such expense hampers the successful operation and decommissioning of the Nation's nuclear facilities.

The regulatory framework and enforcement mechanisms used by the NRC and reviewing courts to enforce the AEA are clear and predictable. Parties can participate in NRC rulemaking and follow NRC actions and processes to determine how the NRC might act in any particular situation. The operable standards apply across all States, regardless of local political imperatives. Any departure from the clarity provided in NRC regulations and rulemaking introduces uncertainty and inefficiencies and

complicates the operation and administration of America's nuclear power generation.

In the Vermont Yankee case discussed above, the Second Circuit agreed with the district court that ENOI and ENVY would face irreparable harm from enforcement of the preempted statute—to wit, a complete shut down of Vermont Yankee. *Entergy Nuclear*, 733 F.3d at 423. Undoubtedly, such a result would have had deleterious financial consequences for ENVY and ENOI. But the actions of Vermont—motivated by safety concerns—already had imposed substantial costs. ENVY and ENOI were forced to undertake significant political expenditures. *See, e.g.*, *Entergy Nuclear*, 838 F. Supp. 2d at 194-95, 199-202. The threat of a potential shutdown also required costly employment measures to retain the specialized workers who run the Vermont Yankee plant. *Entergy Nuclear Vt. Yankee, LLC v. Shumlin*, No. 1:11–cv–99–jgm, 2011 WL 2811317, at *6 (D. Vt. July 18, 2011). And, of course, the litigation itself imposed additional costs. *See, e.g.*, *Entergy Nuclear*, 838 F. Supp. 2d at 189 (referencing preliminary injunction hearing and three-day bench trial on the merits).

When the Federal Circuit had occasion to review ENVY's payment of millions of dollars into the Clean Energy Development Fund as part of a lawsuit related to the Department of Energy's breach of its contractual obligation to take possession of SNF for permanent disposal, it determined these costs were likely preempted as well. *Vt. Yankee Nuclear Power Corp. v. Entergy Nuclear Vt. Yankee, LLC*, 683 F.3d 1330 (Fed. Cir. 2012). While ENVY had been required to make payments into the Clean Energy Development Fund as one step to securing approval

to construct a dry cask storage facility, the Federal Circuit concluded that those costs were not recoverable because Vermont's action in requiring such payment was preempted (and could have been successfully challenged). *Id.* at 1346-47. As the Federal Circuit explained: "The imposed fees bear no relationship to any costs incurred by the state or its citizens as a result of the construction of the dry storage facility. It would not be inaccurate to characterize the fee as a form of blackmail for the state approval of the construction." *Id.* at 1346. The Federal Circuit concluded that, while ENVY's choice to acquiesce to the State's demand for money may have been reasonable from a business perspective, the costs could not be recovered because these fees were preempted, and therefore not foreseeable as damages for the Department of Energy's breach of contract. *Id.* at 1348 ("Just because it may have been in ENVY's best interest to maintain good relations with the state and to agree to pay a fee that was likely preempted by federal law does not render the fee recoverable.").

In its efforts to secure continued operation of the Vermont Yankee plant, ENVY resisted entering into a below-market agreement with Vermont for the purchase of the power the plant generated, opting to sue instead. But by that point, ENOI and ENVY already had complied with the years-long "reliability" study—the fees for which were all billed back to ENVY. *See* 838 F. Supp. 2d at 233-234.

In the case of Shoreham, LILCO had to defend against numerous lawsuits from Suffolk County and public interest groups and then was forced to bring its own lawsuit. *See Long Island Lighting Co.*, 728 F.2d at 55. As a result of the myriad ways in which Suffolk

County (along with other opponents of the plant) sought to prevent the operation of the Shoreham plant, the plant never commenced commercial operation.[6]

The substantial burden Utah attempted to impose on Skull Valley Band in establishing an SNF facility was not only a regulatory headache, it was also exorbitantly expensive. For example, the *application fee* of $5 million likely would have been cost prohibitive, and dissuaded any such potential applicant. *Skull Valley*, 376 F.3d at 1228-29. Utah sought to extract from a potential licensee outsized funds that were likely to be unavailable and thus render the project's actual ability to operate in Utah moot. Indeed, even if a storage facility had been able to withstand the application process, disallowing municipal services to any SNF facility would have greatly increased costs for operators, likely rendering such a facility cost prohibitive to operate.

The fact that courts have held such laws preempted has not always dissuaded certain States in their efforts to exceed the bounds of their authority. Despite decades of decisions holding safety-motivated regulation preempted, Massachusetts's legislators have attempted multiple times in recent years to enact laws that would encumber the decommissioning process. For instance, Massachusetts lawmakers sought to require a post-closure fee of $25 million for every year decommissioning is not completed after a plant has been closed for five years. Mass. Bill S. 1837 (2017), Mass. Bill H. 1765 (2017). A state

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[6] Carl MacGowan, *38 Years After Massive Protest, Shoreham Nuke Plant Sits Empty*, Newsday (June 3, 2017), https://nwsdy.li/2mJfZUQ.

representative explained that "'[e]stablishing the trust fund would also ensure that the spent fuel rods still on site are properly handled post-closure.'"[7] Another bill would have allowed assessments against the owners and operators of nuclear power plants that "could pose potential health risks to the commonwealth's residents in the event of an incident" of up to $250,000 per year. Mass. Bill S. 1836 (2017). Yet another bill sought to require each licensee to fund emergency response expenditures by the State or local governments prior to the transfer of SNF to dry cask storage. Mass. Bill H. 1147 (2017).

Judicial inquiry into the purposes behind such laws is necessary to prevent the use of facially legitimate state regulation for preempted ends. Absent judicial review, States would be free, using non-safety language, to frustrate federal policy, federal regulations, and federal law entrusting nuclear safety exclusively to the NRC and preventing the industry from being saddled with unnecessary state-imposed costs. Because the federal government occupies the entire field of nuclear safety, promulgates detailed and wide-ranging regulations to enforce such safety, and provides for the security of nuclear materials and the Nation's power grid, any additional costs impermissibly imposed by the States hobble the Nation's ability to meet and to maintain its energy generation needs.

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[7] Matthew Muratore, *Should the Pilgrim Nuclear Power Station Be Required to Pay an Annual $25 Million Decommissioning Fee*, Bos. Globe (Nov. 22, 2017), https://bit.ly/2NMrab7.

CONCLUSION

The Court should reverse the judgment of the Fourth Circuit.

Respectfully submitted,

MARCUS V. BROWN
WILLIAM B. GLEW, JR.
ENTERGY SERVICES, INC.
639 Loyola Avenue
New Orleans, LA 70113

TIMOTHY A. NGAU
ENTERGY SERVICES, INC.
1340 Echelon Parkway
Jackson, MS 39213

KATHLEEN M. SULLIVAN
Counsel of Record
SANFORD I. WEISBURST
ELLYDE R. THOMPSON
QUINN EMANUEL URQUHART
& SULLIVAN, LLP
51 Madison Ave., 22nd Fl.
New York, NY 10010
(212) 849-7000
kathleensullivan@
quinnemanuel.com

Counsel for Amici Curiae Entergy Operations, Inc., and Entergy Nuclear Operations, Inc.

No. 16-1275

IN THE

Supreme Court of the United States

VIRGINIA URANIUM, *et al.*,

Petitioners,

v.

JOHN WARREN, IN HIS OFFICIAL CAPACITY AS DIRECTOR OF THE VIRGINIA DEPARTMENT OF MINES, MINERALS, AND ENERGY, *et al.*,

Respondents.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT

BRIEF OF *AMICI CURIAE* FORMER NUCLEAR REGULATORS IN SUPPORT OF PETITIONERS

JAY E. SILBERG
Counsel of Record
SHEILA HARVEY
MICHAEL LEPRE
CYNTHIA COOK ROBERTSON
PILLSBURY WINTHROP SHAW PITTMAN LLP
1200 Seventeenth Street NW
Washington, DC 20036
(202) 663-8000
jay.silberg@pillsburylaw.com

Counsel for Amici Curiae

282363

COUNSEL PRESS
(800) 274-3321 • (800) 359-6859

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INTEREST OF *AMICI CURIAE*[1]

Amici curiae are fourteen former senior nuclear regulators for the United States Nuclear Regulatory Commission ("NRC" or "Commission"). Collectively, *amici curiae* have over 350 years of knowledge of and experience with the regulation of radiological health, safety, and environmental issues, including those associated with uranium milling and long-term tailings management.

The *amici curiae* offer their knowledge and experience as former NRC regulators to address the concerns and common misconceptions about uranium and its byproducts that appear to have led to Virginia's continued moratorium on uranium mining[2], and to explain how NRC's current licensing requirements, dose limits, and regulatory oversight and enforcement authority ensure that there will be no significant harm to health, safety, or the environment from a licensed uranium milling operation or tailings disposal and management.

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1. No counsel for a party authored this brief in whole or in part. *Amici curiae* advise that *amicus* Dr. Malcolm Knapp was engaged as an expert witness on behalf of Petitioner Virginia Uranium in a Virginia state court action against the Commonwealth of Virginia related to the Coles Hill project, in which Virginia Uranium was represented by counsel for Petitioners here. Dr. Knapp was not compensated by Petitioners (or anyone else) for his participation in this brief. No person made a monetary contribution to or intended to fund the preparation or submission of this brief, other than the *amici*, or their attorneys.

By filing statements of consent with the Court, the parties have consented to the filing of this *amicus curiae* brief.

2. *See* Pet.Br. at 15-19.

Amici curiae include former NRC officials **L. Joseph Callan**, former Executive Director for Operations[3]; **Francis X. "Chip" Cameron**, former Assistant General Counsel; **Dr. Nils J. Diaz**, former NRC Commissioner and Chairman; **John T. Greeves**, former Director, Division of Waste Management; **Joseph R. Gray**, former Associate General Counsel for Licensing and Regulation; **Dr. Malcolm R. Knapp**, former Deputy Executive Director for Regulatory Effectiveness; **James Lieberman**, former Director of Enforcement; **Jeffrey S. Merrifield**, former NRC Commissioner; **Ellis W. Merschoff**, former Deputy Executive Director for Operations; **C. William Reamer**, former Director, High-Level Waste Repository Safety Division, Office of Nuclear Materials Safety and Safeguards; **Luis Reyes**, former Executive Director for Operations; **Hugh L. Thompson, Jr.**, former Deputy Executive Director for Regulatory Programs; **Dr. William D. Travers**, former Executive Director for Operations; and **Martin Virgilio**, former Deputy Executive Director for Operations.

Summaries of the *amici curiae*'s relevant background and experience are in the Appendix to this brief.

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3. The Executive Director for Operations is NRC's chief operating officer, discharging the operational and administrative functions of the Commission, supervising and coordinating policy development, managing operational activities, and implementing policy directives. Program offices reporting to the Executive Director of Operations ensure the safe commercial production, use, and disposal of nuclear materials; one of these, the Office of Nuclear Material Safety and Safeguards, regulates activities related to uranium recovery, including waste disposal and management. NRC's four regional offices conduct the inspection, enforcement, and emergency response programs for licensees located within their borders.

BACKGROUND: THE ATOMIC ENERGY ACT AND NRC'S MISSION AND AUTHORITY TO PROTECT PUBLIC HEALTH & ENVIRONMENT

Congress adopted the Atomic Energy Act of 1954 ("AEA"), 42 U.S.C. § 2011 *et seq.*, "to encourage widespread participation in the development and utilization of atomic energy for peaceful purposes to the maximum extent consistent with the common defense and security and with the health and safety of the public[.]" 42 U.S.C. § 2013(d). Because nuclear safety is critical to the development of the civilian nuclear industry, Congress designed the AEA "to insure that nuclear technology be safe enough for widespread development and use[.]" *Pacific Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 213 (1983).

With the enactment of the National Environmental Policy Act of 1969, 42 U.S.C. § 4321 *et seq.*, the Atomic Energy Commission's regulatory mandate was explicitly expanded to cover the environmental impact of the activities regulated by the Commission. *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519 (1978).

The Energy Reorganization Act of 1974, 42 U.S.C. § 5801 *et seq.*, established the NRC as an independent agency responsible for nuclear licensing and related regulatory functions, and increased the number and range of NRC's safety responsibilities over those of its predecessor, the Atomic Energy Commission. *English v. General Elec. Co.* 496 U.S. 72, 81 (1990).

Congress further expanded the NRC's jurisdiction, with specific attention to uranium milling and tailings management, with the passage in 1978 of the Uranium Mill Tailings Radiation Control Act ("UMTRCA"), Pub. L. No. 95-604, 42 U.S.C. § 7901 *et. seq.*

NRC protects the health and safety of the public and the environment by licensing and regulating civilian use of radioactive materials, including source material (uranium and thorium), enriched uranium and plutonium, and byproduct material, including mill tailings. NRC employs over 3,000 people at five primary locations, and has an annual budget of about $1 billion. Approximately 90% of NRC's budget authority is recovered from licensees and license applicants.

SUMMARY OF ARGUMENT

The Virginia legislature's "radiological safety concerns" about "uranium milling and uranium tailings management," Pet.App.26a-27a (Traxler, J., dissenting), such as possible contamination of the drinking water supply by tailings piles, are based on common misconceptions about uranium, radiation, and the federal regulatory process. While radioactive materials must be managed with due care, the NRC is chartered, funded, and staffed to ensure that all aspects of the nuclear fuel cycle are executed safely, and are protective of public health and the environment.

Uranium milling and tailings management, as licensed and regulated by NRC today, do not pose any significant risk to public health or the environment. NRC has exercised its Congressionally-mandated authority to develop and implement comprehensive regulations and effective oversight over these activities.

NRC's layered approach to protect public health and safety and the environment employs carefully crafted regulations incorporating a conservative margin of safety, comprehensive review of license applications and renewals to ensure licensees meet all regulatory criteria, detailed guidance for licensees and prospective licensees, mandatory monitoring, reporting, and on-site inspections and investigations of licensee operations, and enforcement action by NRC if necessary to assure compliance.

ARGUMENT

NRC's regulations and oversight of the uranium milling and tailings management processes provide a high margin of safety for workers, the public, and the environment—both during the operational life of the facility and afterward. NRC's regulations and oversight program have developed through the agency's expertise and experience, and are in line with modern international standards and practices for conventional uranium mining and tailings disposal, which have proven effective.

NRC's radiological safety standards require licensed uranium milling and tailings disposal facilities—like all NRC-licensed facilities—to maintain radiation dose levels as low as reasonably achievable, and in no case higher than NRC's numerical standards, which are set far below levels likely to cause harm.

Before construction of uranium milling facilities and mill tailings impoundments can even begin, prospective licensees must demonstrate to NRC that the planned facilities will meet regulatory requirements designed to ensure the operational safety of the mill and the safe disposal and effective containment of mill tailings for the

long term without the need for active maintenance. NRC inspects and monitors licensees throughout construction and active operations, and at decommissioning, the licensee must return the site and the tailings impoundments to levels similar to the natural surroundings. Ownership of the land on which tailings impoundments are located is then transferred to the Federal or state government for long-term surveillance.

I. The Uranium Recovery Process and the Commission's Regulatory Authority

A. Uranium in the Natural Environment

Uranium is a naturally-occurring element with an average concentration of 2.8 parts per million in the Earth's crust. While large deposits like the Coles Hill orebody are rare, traces of uranium are found almost everywhere on Earth—it is about 500 times more abundant than gold, and about as common as tin. Uranium is commonly found in bedrock materials such as granite and limestone, and trace amounts from natural sources are commonly found in air and water. Vast amounts of uranium are in the world's oceans, although in very low concentrations.

Uranium, whether before or after it is mined and milled, emits radiation, but at levels that are not considered hazardous. For example, a handful of natural uranium ore emits about as much radiation as 10 bananas.[4]

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4. Canadian Nuclear Association, How Radioactive Is Uranium Ore?, http://talknuclear.ca/2014/08/just-how-radioactive-is-uranium-ore/ (last visited July 24, 2018). Bananas contain the naturally-occurring radioactive isotope potassium-40.

Natural uranium is primarily (>99%) composed of U-238, an isotope with very low radioactivity and a half-life of over 4 billion years, meaning that it emits radiation at a very slow rate. Natural uranium also has minute quantities of more radioactive isotopes U-235 and U-234; the enrichment process increases the U-235 concentration to create nuclear fuel.

Uranium's radioactive decay produces radon, a radioactive gas. While exposure to high levels of radon over an extended period may be harmful, everyone on Earth is exposed to radon from natural sources, accounting for most of the background dose.[5]

B. Uranium Mining, Milling, and Tailings Management

Uranium recovery involves three stages: mining, milling, and tailings management. After mining, uranium ore goes to a milling facility to be crushed and put through a chemical leaching process to extract the uranium oxide (principally U_3O_8), known as "yellowcake," as a first step in the production of nuclear fuel.[6] Yellowcake is then transported to conversion and enrichment facilities, for fabrication into nuclear fuel.[7]

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5. *See infra* notes 29-36 and accompanying text.

6. NRC, Uranium Recovery, https://www.nrc.gov/materials/uranium-recovery.html (last visited July 24, 2018).

7. NRC, Uranium Conversion, https://www.nrc.gov/materials/fuel-cycle-fac/ur-conversion.html (last visited July 24, 2018).

Uranium at the yellowcake stage has the same radioactivity as it did when it was underground. The milling process extracts most of the uranium from the ore, but does not alter the proportions of the uranium isotopes, which remain at their natural concentrations. In this form, it is barely more radioactive than the granite used in buildings.[8] There is no nuclear criticality hazard and little fire or explosive risk. Radiological hazards are also low, as uranium has little penetrating radiation and only moderate non-penetrating radiation. The primary industrial hazards associated with uranium milling are the occupational hazards found in any metal milling operation that uses chemical extraction, as well as the chemical toxicity of the material itself.

The primary radiological hazard is from radium in the fine-grained, sandy waste byproduct material known as "mill tailings," which remains after the milling process extracts and concentrates the uranium from the ore. Tailings are deposited in an impoundment or "mill tailings pile," which is carefully regulated, monitored, and controlled because of the remaining amounts of uranium and other metals, as well as radium produced by uranium's radioactive decay, which further decays to produce radon.

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8. World Nuclear Association, Radioactive Waste Management, http://www.world-nuclear.org/information-library/nuclear-fuel-cycle/nuclear-wastes/radioactive-waste-management.aspx (last visited July 24, 2018).

C. NRC's Regulatory Authority and Obligation to Ensure Safety of Uranium Milling and Tailings Management

NRC licenses are required to "transfer or receive in interstate commerce, manufacture, produce, transfer, acquire, own, possess, import, or export" any radioactive "source material," including natural uranium after it has been removed from nature, and "byproduct material," one form of which is uranium milling tailings. 42 U.S.C. §§ 2092; 2111; 2014(z); 2014(e)(2).[9] The NRC's licensing authority for the uranium recovery process begins at the milling stage,[10] and includes both the milling of uranium ore and mill tailings management.

Until 1978, uranium mill tailings were not federally regulated and sometimes were even used as building materials.[11] As a result, large quantities of tailings accumulated at milling sites, particularly in Western states, and there were several incidents involving breaches of poorly designed tailings impoundments.[12]

Congress added uranium mill tailings to AEA's definition of licensable "byproduct material" in the

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9. NRC may delegate by agreement its licensing and regulatory authority to states, provided the state's regulation is at least as strict as NRC's. 42 U.S.C. § 2021. Virginia's agreement with NRC does not cover uranium milling or tailings disposal.

10. Virginia would have regulatory control over the mining component.

11. *See* H.R. REP. No. 1480, pt. I, 95th Cong., 2d Sess.

12. *Id.*

Uranium Mill Tailings Radiation Control Act of 1978, which requires NRC to prevent such problems in future milling operations. UMTRCA requires NRC to protect public health by ensuring that mill tailings are stabilized and controlled in a safe and environmentally sound manner to minimize or eliminate radiological and non-radiological health hazards to the public. 42 U.S.C § 2114. UMTRCA also requires NRC to ensure the licensee's financial capability to meet decontamination, decommissioning, and reclamation obligations, and that title to the tailings disposal site is transferred to the Federal or state government for long-term surveillance and management. *Id.* §§ 2113; 2201(x).

These provisions authorize the NRC to use its regulatory authority to assure that the problems resulting from uranium mill tailings and uranium milling operations that led to the passage of UMTRCA would not recur. And they have not reoccurred.

II. NRC Regulation of Uranium Milling and Tailings Management

NRC regulates uranium milling and disposal of the resulting waste materials by (1) setting and enforcing radiation protection standards, and (2) establishing and overseeing a licensing and inspection program that requires uranium milling and mill tailings operations to control industrial hazards and address waste and decommissioning concerns as a condition of licensing.

Consistent with its mission, NRC focuses its regulatory actions on protecting the health and safety of workers, the public, and the environment in reviewing

license applications and amendments for uranium recovery facilities, developing and releasing for public comment safety evaluations, environmental assessments and environmental impact statements documenting the agency's licensing reviews; inspecting active uranium recovery facilities; and reviewing and overseeing decommissioning plans and activities.

NRC's comprehensive regulations, developed through extensive public comment and reference to international standards and practices, provide a strong foundation to ensure that NRC's licensing, oversight, and enforcement of uranium milling and mill tailings disposal effectively promote safety and protect public health and the environment.

A. NRC's Regulatory Standards for Protection Against Radiation Establish a Substantial Margin of Safety for Workers and the Public

The protective standards that NRC established in Title 10, Part 20 of the Code of Federal Regulations ("Part 20") are designed to keep radiation doses to workers and members of the public within specified limits that provide "a very substantial margin of safety for exposed individuals ... in accordance with present knowledge[.]"[13] By requiring all NRC licensees to also make every reasonable effort to maintain radiation exposures and releases of radioactive materials to unrestricted areas "as low as is reasonably

13. Standards for Protection Against Radiation (1957 Final Rule), 22 Fed. Reg. 548, 549 (January 29, 1957) (noting that "the standards are subject to change with the development of new knowledge.").

achievable (ALARA)," 10 C.F.R. § 20.1101(b), "the degree of protection could be significantly greater than from relying upon the dose limits alone."[14]

At the relatively low levels of radiation exposure in the United States, it is difficult to demonstrate a relationship between exposure and any health effects.[15] The dose limits in Part 20 are therefore based upon what NRC considers an acceptable level of risk to the exposed individual, and are well below dose levels likely to cause harm, with a considerable margin of safety.[16]

NRC generally follows the radiation protection recommendations of the International Commission on Radiological Protection ("ICRP"), an independent, non-governmental organization, which issues widely-followed recommendations and guidance on radiation protection, and its U.S. counterpart, the National Council on Radiation Protection and Measurements ("NCRP").[17] The initial 1957 Part 20 standards substantially agreed with standards NCRP set in 1953 (and later adopted by ICRP), and Part 20 was amended in 1960 to reflect NCRP's revised 1959 standards.[18]

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14. Standards for Protection Against Radiation (1991 Final Rule), 56 Fed. Reg. 23360 (May 21, 1991).

15. *See* NRC, *ALARA Levels for Effluents from Materials Facilities*, Regulatory Guide 8.37 (July 1993), p.2.

16. *See id.*; *see also* 56 Fed. Reg. at 23360-23361.

17. 22 Fed. Reg. at 549; 56 Fed. Reg. at 23361.

18. *See* 79 Fed. Reg. 43284, 43285-43286 (July 25, 2014) (recounting regulatory history of Part 20).

NRC comprehensively revised Part 20 in 1991 to reflect standards issued by the ICRP in 1977 and 1978 and NCRP's 1987 recommendations, including an ALARA requirement.[19] Accordingly, in practice, and by regulatory design, NRC licensees inevitably maintain levels well below Part 20's regulatory limits.[20]

1. Maximum Radiation Dose Levels and Effluent Concentration Limits

All NRC licensees—including uranium mills and tailings disposal sites—must maintain radiation exposures below Part 20 annual dose limits and effluent concentration limits, and demonstrate compliance through routine radiation monitoring and reporting. The current dose limits are consistent with NCRP's current standards, which set a dose limit for which the probability of injury is so low that the risk would be readily acceptable to the average individual and that competent medical authorities would not find deleterious to health.

i. Occupational Workers

The maximum annual dose to workers at a licensed facility is 5,000 millirem[21] per year. 10 C.F.R. § 20.1201(a). Airborne concentrations to which radiation workers may

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19. *See* 56 Fed. Reg. at 23360-23363.

20. *See id.* at 23363; 81 Fed. Reg. 95410, 95411 (Dec. 28, 2016).

21. A millirem ("mrem") is one one-thousandth of a rem, a standard unit of measure for radiation. It is equivalent to 0.01 sievert, a more commonly used standard measurement for radiation outside the United States.

be exposed must also meet strict concentration limits. *Id.* § 20.1201(d).[22] Workers exceeding 10% of the occupational dose limit must receive an annual dose report. *Id.* § 20.2206.[23]

NRC continues to evaluate whether the dose limits should be further reduced.[24] NRC has so far determined that no change is necessary, given the already very high margin of safety of the current standard and the fact that even licensees with the highest exposure levels in the nuclear industry continue to report levels below the ICRP's current occupational dose recommendations.[25]

ii. Members of the Public

The annual dose limit to members of the public from an NRC-licensed operation must be below 100 millirem per year. 10 C.F.R. § 20.1301. Both airborne and liquid effluents released to the accessible environment must meet strict concentration limits to demonstrate compliance

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22. *See also* Part 20, subpart H; NRC, *Methods for Estimating Radioactive and Toxic Airborne Source Terms for Uranium Milling Operations*, Regulatory Guide 3.59 (March 1987).

23. *See also* NRC, *Health Physics Surveys in Uranium Recovery Facilities*, Regulatory Guide 8.30 (Rev. 1, May 2002).

24. *See, e.g.*, 79 Fed. Reg. 43284 (advance notice of proposed rulemaking).

25. *See* 81 Fed. Reg. at 95411 (finding that nuclear industry's current operating procedures and practices protect both occupational workers and members of the public and go beyond the applicable regulatory requirements, such that further reduction of dose limits "would result in little, if any, improvement in occupational or public radiological safety").

with this requirement. *See id.* § 20.1302.[26] NRC requires licensees to use these conservative assumptions in demonstrating compliance with this standard in order to assure that the doses to actual populations in the vicinity of any licensed facility are small fractions of the public dose limit.

iii. Compliance and Reporting

Licensees must conduct surveys and monitoring to assess radiation levels and concentrations of effluents in air and water, such as may be necessary to comply with Part 20 regulations. 10 C.F.R. § 20.1501. Records of routine surveys and monitoring are reviewed at least yearly by NRC.

Licensees must promptly report any significant incidents, exposures, and doses in excess of regulatory limits to allow NRC to assess and coordinate a response. *Id.*, subpart M. If necessary, NRC has authority to enforce dose limits through civil and criminal penalties. *Id.*, subpart O.

All licensees must also maintain a formal radiation protection program "sufficient to ensure compliance" with Part 20 limits and requirements, using procedures and engineering controls "to achieve occupational doses and doses to members of the public that are as low as is reasonably achievable (ALARA)." *Id.* § 20.1101.[27] The

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26. Part 20, Appendix B, Table 2 shows air and water concentrations for various effluents at which continuous exposure over the course of a year would result in a total dose of 50 millirem.

27. Regulatory Guide 8.37, *supra* n.15, addresses the design and implementation of radiation safety program in materials facilities.

ALARA philosophy assumes that any level of radiation exposure carries a commensurate risk, and thus exposures should be minimized when practical.[28]

Licensees must review their radiation protection program content and implementation at least annually, *Id.* § 20.1101(c), and maintain written records of program audits and implementation. *Id.* § 20.2102.

2. Maximum Dose Limits in Perspective

To put the annual maximum dose limits in perspective, it is first important to recognize that everyone on Earth is—and always has been—exposed to some level of naturally-occurring cosmic and terrestrial radiation, and radioactive isotopes naturally present in human bodies.[29] Even extraordinarily high background doses—10,000 millirem or more—do not appear to result in increased cancers or other health problems.[30]

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28. NRC, *Operating Philosophy for Maintaining Occupational and Public Radiation Exposures as Low as Is Reasonably Achievable*, Regulatory Guide 8.10, (Rev. 2, Aug. 2016), p.5. *See also* NRC, *Information Relevant to Ensuring that Occupational Radiation Exposures at Uranium Recovery Facilities Will be ALARA*, Regulatory Guide 8.31 (Rev. 1, May 2002).

29. *See* NRC, Natural Background Sources of Radiation, https://www.nrc.gov/about-nrc/radiation/around-us/sources/nat-bg-sources.html (last visited July 24, 2018).

30. World Nuclear Association, Nuclear Radiation Health Effects, http://www.world-nuclear.org/information-library/safety-and-security/radiation-and-health/nuclear-radiation-and-health-effects.aspx (last visited July 24, 2018) (natural levels in some areas of more than 100 millisieverts (10,000 millirem) do not appear to cause harm).

The average person in the U.S. receives an annual average dose of about 620 mrem from all background sources, of which about half (310 mrem) is from naturally-occurring radiation,[31] mostly from radon produced by the decay of uranium in the natural environment[32], although radon levels vary widely by location.[33] By far, most of the average American's radiation exposure comes from cosmic radiation, the Earth, naturally occurring radon, medical procedures, and computer and television screens—*not* from nuclear energy or uranium mining.[34]

Uranium mines and nuclear facilities together account for only about 0.1% of the average American's annual radiation exposure due to man-made sources.[35] Most man-made radiation exposure is from nuclear medicine and medical procedures (*e.g.*, chest x-ray, 10 mrem; mammogram, 72 mrem; full-body CT scan, 1,000 mrem),

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31. NRC, Doses in Our Daily Lives, https://www.nrc.gov/about-nrc/radiation/around-us/doses-daily-lives.html (last visited July 24, 2018).

32. Natural Background Sources, *supra* note 29.

33. For example, the average annual dose from radon is 260 mrem for a person living in Virginia, but 610 mrem for someone living in Colorado. *See* S. Cohen & Assoc., (for EPA Office of Radiation and Indoor Air), ***Assessment of Variations in Radiation Exposure in the United States***, (July 15, 2005), p.4, ***available at*** https://www.orau.org/ptp/PTP%20Library/library/Subject/Environmental/radiationbackground.pdf.

34. *See* NRC, Sources of Radiation, https://www.nrc.gov/about-nrc/radiation/around-us/sources.html (last visited July 24, 2018).

35. *Id.*

accounting for about 48% of the average American's total annual exposure; consumer products (*e.g.*, televisions, computer screens) make up about 2 percent.[36]

And one's proximity to the source greatly affects the dosage. For example, the annual dose due to radon at 100 meters downwind of a uranium tailings pile that complies with the NRC regulatory standard has been projected as 140 mrem/year, at 2 kilometers away from the tailings pile it is 1.4 mrem/year,[37] or less than the radiation dose from a cross-countryc flight (3.5 mrem)[38].

Many studies have estimated that the health risks posed by low doses of radiation, such as those from mill tailings impoundments, are so low that they cannot be directly measured, even with studies looking at very large populations. For example, *Health Effects of Exposure to Low Levels of Ionizing Radiation*,[39] also known as the "BEIR V," found that a dose of 1 millirem results in a calculated increased risk of cancer of less than 1/1,000,000.[40]Even this may overestimate the actual cancer risk due to radiation at the very low doses

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36. *Id.*; *see also* Doses in Our Daily Lives, *supra* note 31.

37. Calculated from NRC, *Final Generic Environmental Impact Statement*, NUREG-0706 (Sept. 1980) ("Final GEIS"), p.329 Table 12.2. *See also infra* note 44.

38. Centers for Disease Control and Prevention, Radiation from Air Travel, https://www.cdc.gov/nceh/radiation/air_travel.html (last visited July 24, 2018).

39. National Research Council, The National Academies Press (1990)(cited in 1991 Final Rule, 56 Fed. Reg. at 23362-23363).

40. *Id.* p.172.

associated with uranium mill tailings, given that there is no evidence of direct human health effects below a dose of 10 millisieverts, or 1,000 millirem.[41] Although NRC follows very conservative international regulatory guidance out of an abundance of caution, there is in fact no direct evidence of a health risk from exposures at or below the low public and occupational standards established in Part 20.[42]

B. NRC's Licensing, Regulation, and Oversight of Uranium Milling and Mill Tailings Disposal Protects Workers, the Public, and the Environment from Potential Hazards

NRC licenses and regulates conventional uranium milling operations (such as the kind being proposed by Petitioners in this case), including tailings management, under 10 C.F.R. Part 40 ("Part 40"), "Domestic Licensing of Source Material," especially Appendix A to Part 40 ("Part 40 Appendix A"), *Criteria Relating to the Operation of Uranium Mills and the Disposition of Tailings or Wastes.* Appendix A's specific criteria ensure that UMTRCA's statutory mandates are met, and that uranium milling operation and tailings management complies with regulatory dose and effluent limits.

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41. United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR), Frequently Asked Questions, http://www.unscear.org/unscear/en/faq.html (last visited July 24, 2018).

42. *See* Nuclear Radiation Health Effects, *supra* note 30.

1. Licensing Criteria for Operation of Uranium Mills and Disposition of Tailings or Wastes

Part 40 Appendix A, developed with extensive public involvement[43], reflects NRC's conclusions regarding the best and most practical safety measures and technology to contain the hazards associated with milling and tailings management for the very long term at radiation levels similar to those found in the natural environment. It establishes "technical, financial, ownership, and long-term site surveillance criteria relating to the siting, operation, decontamination, decommissioning, and reclamation of mills and tailings or waste systems and sites at which such mills and systems are located"[44]

NRC amended Part 40 Appendix A in 1985, to incorporate EPA's groundwater protection standards contained in 40 C.F.R. Part 192, *Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings*, promulgated in 1983 pursuant to UMTRCA.[45]

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43. NRC received and considered approximately 1,500 substantive comments from private individuals, state and Federal agencies, uranium mining companies, trade associations, and public interest groups on proposed rule changes to implement UMTRCA's requirements and the related draft Generic Environmental Impact Statement (GEIS).

44. Uranium Mill Licensing Requirements (Final Rule), 45 Fed. Reg. 65521 (Oct. 3, 1980) (adopting Part 40 Appendix A). NRC's three-volume Final GEIS (*supra* note 37) reflects the data and analysis supporting the Part 40 Appendix A criteria.

45. Final Rule, 50 Fed. Reg. 41852 (Oct. 16, 1985).

i. Planning, Siting, and Design of Mill Tailings Impoundments

The primary consideration driving planning, siting, design, and construction of mill tailings retention is the prevention of contamination and environmental damage over the very long term. Successful site selection and design for uranium recovery retention systems requires a detailed assessment of local conditions, including climate, ground-water and surface-water hydrology, geology, and seismology, and their impacts.[46]

The goal is permanent isolation of tailings and associated contaminants by minimizing disturbance and dispersion by natural forces and to do so without the need for ongoing maintenance. To accomplish this, applicants must optimize (i) remoteness from populated areas, (ii) hydrologic and other natural conditions as they contribute to continued immobilization and isolation of contaminants from groundwater sources; and (iii) potential for minimizing erosion, disturbance, and dispersion by natural forces over the long term. Part 40 Appendix A, Criterion 1.

Because below-grade disposal reduces the risk of catastrophic collapse or breach, and eliminates or reduces to very low levels the effects of natural weathering and erosion which could disrupt the tailings isolation, it is the "prime option" for tailings disposal. *Id.*, Criterion 3.

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46. NRC, *Design, Construction, and Inspection of Embankment Retention Systems at Uranium Recovery Facilities*, Regulatory Guide 3.11 (Rev. 3, Nov. 2008), p.4.

ii. Durability and Effectiveness of Containment System

Tailings facilities must limit releases of radon to 20 picocuries per square meter per second (pCi/m^2s), and reduce direct gamma exposure from the tailings or wastes to natural background levels. Part 40 Appendix A, Criterion 6.

Because "[t]ailings impoundments constitute large, diffuse, and essentially permanent area sources,"[47] tailings disposal facilities must be designed to control radiological hazards for 1,000 years, to the extent reasonably achievable, and, in any case, for at least 200 years. Part 40 Appendix A, Criterion 6. To help applicants and licensees develop siting and design choices that will meet this requirement, NRC has issued guidance describing acceptable methods for calculating radon fluxes through earthen covers and the resulting minimum cover thickness needed to meet NRC's and EPA's standards.[48]

Part 40 Appendix A's siting and design criteria anticipate and mitigate erosion and other natural forces, including extreme weather or geological events, for the long term. For example, tailings impoundments must also withstand a maximum credible earthquake based upon an evaluation of earthquake potential considering the regional and local geology and seismology; below-grade disposal sites (*see* Criterion 4) will typically meet these

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47. Final GEIS p.21.

48. NRC, *Calculation of Radon Flux Attenuation by Earthen Uranium Mill Tailings Covers*, Regulatory Guide 3.64 (June 1989)

criteria.[49] Tailings impoundments must also "be designed very conservatively to avoid flood damage," in order to meet Criterion 6 durability requirements.[50]

While some have suggested that "tailings piles will eventually become uncovered and tailings widely dispersed," it is just as likely that "the erosion which might uncover tailings piles will eventually uncover natural ore bodies as well," and thus mining and milling of uranium has no significant net impacts over leaving the ore body in place.[51]

iii. Groundwater and Air Protection

Caps and liners enclosing the tailings storage cells reduce the risk of air or water-borne dispersion of radiological material to negligible levels, and methods such as dewatering tailings reduce seepage of toxic materials into groundwater to the maximum extent reasonably achievable. Any seepage which might occur must not result in the deterioration of the quality of existing affected groundwater.[52] Part 40 Appendix A, Criterion 5.

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49. *See also* Final GEIS, *supra* note 37, at p.287 ("For tailings buried below-grade, there should be no adverse effect ... the most likely result would be further settlement of the tailings and cover.").

50. *Id.* p.287; *see also* 50 Fed. Reg. at 41857.

51. Final GEIS, *supra* note 37, at p.23.

52. Criterion 5 also addresses restoration of groundwater contaminated by seepage of toxic materials from mill tailings sites. Criterion 13 lists constituents for which NRC must set standards for compliance, if the constituent is reasonably expected to be in

Milling operations must be conducted so that all airborne effluent releases are reduced to levels as low as is reasonably achievable, primarily by means of emission controls. *Id.*, Criterion 8. Strict emissions controls also avoid site contamination.[53] Uranium byproduct materials effluent levels must also be managed so as to conform to EPA regulations.[54] NRC guidance provides methods, models, data, and assumptions acceptable for estimating airborne emissions of radioactive and toxic materials from various steps in uranium milling, to assist applicants and licensees in preparing required environmental reports.[55]

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or derived from the byproduct material and has been detected in groundwater. These criteria incorporate EPA's basic groundwater protection standards in 40 C.F.R. § 192, subparts D & E.

53. NRC explains in *Minimization of Contamination and Radioactive Waste Generation: Life Cycle Planning*, Regulatory Guide 4.21 (June 2008), "how facility design and procedures for operation will minimize ... contamination of the facility and the environment, facilitate eventual decommissioning, and minimize ... the generation of radioactive waste." *See* 10 C.F.R. § 20.1406. This guidance was drawn from nuclear industry experience and lessons learned from decommissioning.

54. 40 C.F.R. Pt. 440, *Ore Mining and Dressing Point Source Category: Effluent Limitations Guidelines and New Source Performance Standards*, subpart C, *Uranium, Radium, and Vanadium Ores.*"

55. Regulatory Guide 3.59, *supra* note 22.

2. License Application Review and Renewal Process

An NRC source and byproduct material license is required to recover uranium from ore. 10 C.F.R. § 40.31. NRC performs a thorough, public review of all new license applications and license renewals. NRC bills applicants and licensees for costs associated with licensing and oversight. 10 C.F.R. § 170.31.[56]

New license applicants for a uranium milling facility operating license and renewing licensees "must clearly demonstrate how the requirements and objectives set forth in [A]ppendix A have been addressed," 10 C.F.R. § 40.31(h). Indeed, construction cannot begin until NRC confirms the applicant's proposed plans meet these requirements. *Id.* §§ 40.14, 40.32(e).[57]

Applicants address these criteria in a technical report submitted with their application. NRC also requires licensees to prepare an environmental report that serves as the basis for NRC's environmental assessment or Environmental Impact Statement ("EIS"). Applicants must also make financial assurances as to their ability to fund decontamination and decommissioning of the site, to surrender title to the land on which tailings impoundments are sited, and to fund long-term monitoring of tailings impoundments by the government. *See* Section II.B.4, *infra*.

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56. *See also* NRC, Cost Projections for Uranium Licensing Actions, https://www.nrc.gov/materials/uranium-recovery/cost-projections-license-apps.html (last visited July 20, 2018).

57. *See also* 45 Fed. Reg. at 65529.

NRC licensing proceedings are public; notices regarding license applications and renewals are published in the Federal Register, and license applications are made available online.[58] Public hearings may be held, and comments from the public regarding license applications and review are welcomed and considered. Any person whose interest may be affected by a proceeding and who desires to participate as a party may file a request for a hearing, or to intervene in an existing hearing. 10 C.F.R. § 2.309.

i. Technical Report Assessment

License applications include a detailed technical report addressing the effects of the proposed operations on public health and safety. For license renewals and amendments, the licensee must also address changes in proposed operations that NRC has not previously reviewed and operational history since its last license issuance.

The NRC's review determines whether the applicant's application complies with Part 40 Appendix A and other regulatory requirements. NRC reviews the applications according to a standard review plan to ensure consistency of review and acceptance criteria for the applicant's proposed activities; site characterization; design of the proposed facility; management plans and controls, staff qualifications, radiation safety training, security and

58. *See* NRC, License Applications for New Uranium Recovery Facilities, Expansions, Restarts, and Renewals, https://www.nrc.gov/materials/uranium-recovery/license-apps.html (last visited Jul. 24, 2018).

quality assurance; operational monitoring, radiation safety controls, reclamation and decommissioning plans, and accident management, including radiological accident procedures and training programs.[59]

ii. Environmental Assessment and NRC's Environmental Impact Statement

In carrying out the NRC's obligations under the National Environmental Policy Act, NRC requires applicant to include as part of its application a report addressing the environmental impact of the mill, adverse environmental effects that cannot be avoided should the mill be licensed, alternatives to the mill, and any irreversible and irretrievable commitments of resources involved. 10 C.F.R. § 51.45.[60]

The applicant must address ore-body locations, the anticipated quantity of ore to be mined and milled, mining methods, plans for overburden storage and disposal, milling processes, plans for tailings disposal and management, operating plans and schedules, expected longevity of the project, planned end use of the project areas, and surety arrangements for the eventual decommissioning of the mill and reclamation of the areas impacted. The applicant must also address the environmental effects of site preparation, mill construction and mine opening; the environmental effects of mill and mine operation, including radiological and chemical impacts on humans and radiological effects on the biosphere; effluent and

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59. NRC, *Standard Review Plan for Conventional Uranium Mill and Heap Leach Facilities* (NUREG-2126) (Nov. 2014).

60. *See also* NRC, *Preparation of Environmental Reports for Uranium Mills*, Regulatory Guide 3.8 (Rev. 2, Oct. 1982).

environmental monitoring; the environmental effects of accidents; and economic and social effects.

The environmental report must provide sufficient information to support NRC's development of the EIS required when issuing a license for uranium milling. *See* 10 C.F.R § 51.20(a)(8). NRC's review and development of the EIS follows *Review Guidance for Licensing Actions Associated with NMSS Programs* (NUREG-1748) (NRC, Aug. 2003), which dictates that the EIS include a description of the affected environment and the environmental impacts of issuing a license, including land use, water resources, ecology, cultural and historic resources and public and occupational health. The EIS must also address mitigation measures and environmental monitoring and include a cost benefit analysis.

Prior to granting a license, the NRC publishes a draft EIS for public comment, typically conducting a public meeting or meetings near the site of the proposed action. Comments are taken into account in preparing the Final EIS.

3. Oversight of Active Uranium Milling and Mill Tailings Facilities

i. Regulatory Guidance

The Commission issues Regulatory Guides, reports, issue summaries, and other communications providing applicants and licensees with detailed guidance on how best to achieve compliance with NRC's regulations, from the initial design and planning stages through decommissioning. Regulatory Guides are first published in draft form for public review and comment.

For uranium milling and mill tailings management, the NRC provides extensive guidance regarding the Part 20 and Part 40 criteria and other applicable regulatory requirements, several examples of which have been cited throughout this brief.[61]

ii. Routine Monitoring, Self-inspection, and Reporting Requirements

Licensees must monitor and record radiation and effluent levels throughout construction and operation of the mill to ensure compliance with applicable standards and regulations, evaluate performance of control systems and procedures, assess environmental impacts, and detect potential long-term effects. Comprehensive monitoring of milling operations begins at least one full year prior to any major site construction, at which time the licensee must conduct a preoperational monitoring program on the milling site and its environs. Part 40, Appendix A, Criterion 7. The licensee must also establish a detection monitoring program required for NRC to set site-specific groundwater protection standards. *Id.*, Criterion 7A.

Daily inspections of tailings or waste retention systems must be conducted and documented by a qualified engineer or scientist during the facility's operational phase. Any failures or concerning issues identified must be immediately reported to the regional NRC office. *Id.*, Criterion 8A.

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61. *See* NRC, Uranium Recovery Regulations, Guidance, and Communications, https://www.nrc.gov/materials/uranium-recovery/regs-guides-comm.html (last visited July 24, 2018).

NRC requires uranium recovery licensees to report semiannually on radioactive effluents, and to report any other information NRC needs to estimate potential radiation doses to the public. NRC may require licensees to take corrective actions based on these reports.

Escalated reporting is required for serious or significant accidents or contamination. 10 C.F.R. §§ 20.2202; 30.50. NRC operates a 24/7 emergency response center in order to rapidly evaluate and respond to abnormal conditions or accidents that occur at licensed nuclear facilities.

iii. Facilities Inspections

NRC inspectors observe licensed facilities first-hand to confirm radioactive materials are properly controlled, areas containing radiation or radioactive contamination are properly restricted, and radiological monitoring equipment is operational. Inspectors review the licensee's monitoring records to confirm that required monitoring is being conducted and recorded, and to note any overexposures or effluent releases in excess of regulatory thresholds. Inspectors also review records of any events involving contamination, releases, equipment malfunctions, or other similar events. They review training records to confirm employee training is being conducted in accordance with the licensee's commitments, and interview workers and managers to affirm that they understand and comply with radiological safety standards, and to hear any concerns they may have.

Inspectors issue reports addressing all concerns identified, and follow up to ensure that necessary

corrections are made. If necessary, NRC has the authority to suspend or revoke a license or to order temporary or permanent termination of operations. *See* 10 C.F.R. § 40.71.

iv. Corrective and Enforcement Actions

In addition to inspections conducted by technical trained inspectors, the NRC oversight process uses experienced investigators to evaluate allegations of willful misconduct.

If the results of NRC's oversight actions identify violations, NRC takes enforcement action in accordance with its Enforcement Policy such as issuance of notices of violations, civil penalties, orders suspending, modifying, or revoking licenses, and makes referrals to the Department of Justice for consideration of criminal prosecution.[62] The public may also petition the NRC to take enforcement action. 10 C.F.R. § 2.206. NRC notifies the public of all significant enforcement actions.[63]

Whether or not compliance issues are identified, pursuant to Sections 161 and 186 of the AEA, as amended, the Commission may issue orders requiring a licensee to

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62. *See* NRC, *Enforcement Policy* (May 15, 2018); *see also* NRC, Enforcement Guidance, https://www.nrc.gov/about-nrc/regulatory/enforcement/guidance.html (last visited July 24, 2018).

63. *See* NRC, Escalated Enforcement Actions Issued to Materials Licensees, https://www.nrc.gov/reading-rm/doc-collections/enforcement/actions/materials/ (last visited July 24, 2018) (listing. all significant enforcement actions that NRC has issued to materials licensees since 1996).

take action as may be necessary or desirable to protect the public health and safety. *See* 10 C.F.R. § 2.202(a)(1).

4. Decontamination, Decommissioning and Long-Term Site Surveillance

Each licensed mill operator must make sufficient financial surety arrangements before the commencement of operations to assure that funds will be available to carry out the eventual decontamination and decommissioning of the site and for the reclamation of any tailings or waste disposal areas. Part 40 Appendix A, Criterion 9. Owners must also yield title to the land used for the disposal of uranium mill tailings to the United States or the state in which the site is located, at the option of the state. *Id.*, Criterion 11. To cover the cost of long-term surveillance, each licensee must pay a fee substantial enough to yield interest in an amount sufficient to cover the annual costs of site surveillance. *Id.*, Criteria 10 & 12.

If all of the Part 40 Appendix A licensing requirements have been met, the final disposition of tailings should not require ongoing active maintenance to preserve isolation. The government agency responsible for long-term care of the disposal site will conduct annual inspections to confirm its integrity and to determine the need, if any, for maintenance and/or further monitoring. *See id.*, Criterion 12.

III. The NRC's Regulation and Oversight Program Prevents Contamination and Protects Public Health and the Environment

Although critics of the Coles Hill uranium recovery project proposed by Petitioners have raised the specter of problems and incidents that arose prior to the enactment of the UMTRCA at older mill tailings disposal sites in the Western U.S. and elsewhere, those problems arose precisely because mill tailings disposal was unregulated.[64]

In fact, these were the very problems UMTRCA and NRC's Part 40, Appendix A were specifically designed to address. A "worst case scenario" such as the 1979 Church Rock uranium mill tailings spill, in which an earthen dam built on geologically unsound ground failed, releasing over 1,000 tons of mill tailings and 93 million gallons of tailings solution[65] is no longer a realistic possibility under today's regulatory system. Indeed, because the Church Rock incident occurred during NRC's development of Part 40 Appendix A, it underscored for all stakeholders the urgency and importance of developing a regulatory framework that will ensure safe and effective mill tailings management for the very long term.[66]

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64. *See, e.g.*, J.A.154-55.

65. *See Mill Tailings Dam Break at Church Rock, New Mexico: Hearing Before the Subcomm. on Energy and the Environment, H. Comm. on Interior and Insular Affairs*, 96th Cong, 1st Sess. (October 22, 1979), p.19-24.

66. *Id.* at 171-198 (testimony of NRC Director of Nuclear Material Safety and Safeguards referencing 44 Fed. Reg. 50012-50025 (Aug. 24, 1979) (proposed rule)).

Today, nothing resembling the Church Rock spill is possible at an NRC-licensed mill site, because NRC's licensing and regulation of mill tailings disposal and management following Congress's passage of UMTRCA ensures the safe disposal and long-term storage of mill tailings and associated waste products. *See* Section II, *supra*. Church Rock and incidents like it have served as a lesson for NRC regulators on the potential costs of failing to ensure full compliance.[67]

NRC is also part of the international nuclear regulatory community, which has collectively developed effective practices and expertise in regulating uranium milling and tailings disposal over the past four decades. In a 2014 report, the Nuclear Energy Agency (NEA) of the Organization for Economic Co-Operation and Development (OECD), a cooperative international organization of which the United States is a member, "compar[ed] currently leading approaches" for the management of the environment and health impacts of uranium mining with "outdated practices."[68] The OECD report found that "[u]ranium mining and milling has evolved significantly over the years" and that the review

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67. *See, e.g.*, NRC, *Operational Inspection and Surveillance of Embankment Retention Systems for Uranium Mill Tailings*, Regulatory Guide 3.11.1 (Rev. 1, Oct. 1980), p.2 and Table 1 (listing tailing accidents from 1959 through 1979, noting while that modern geotechnical engineering and technology would prevent most such accidents, cautious and regular surveillance is also necessary to assure accident prevention).

68. OECD, National Energy Agency, *Managing Environmental and Health Impacts of Uranium Mining*, NEA-7602 (2014), available at http://www.oecd-nea.org/ndd/pubs/2014/7062-mehium.pdf.

of current practices "demonstrates how uranium mining can be conducted in a way that protects workers, the public and the environment." Today,

> [i]nnovative, modern mining practices combined with strictly-enforced regulatory standards [that] are geared towards avoiding past mistakes committed primarily during the early history of the industry when maximising uranium production was the principal operating consideration. Today's leading practices in uranium mining aim at producing uranium in an efficient and safe manner that limits environmental impacts to acceptable standards.[69]

While no industrial operation (and no human activity) is entirely without risk, uranium milling and tailings management, as currently regulated and practiced, is protective of the public health and safety and of the environment. It is reasonable to assume that the comprehensive and effective regulatory standards and practices developed by NRC and the international community will sufficiently manage the risks involved and protect the health and safety of Virginia's citizens and its environment, should Virginia's current moratorium be overturned.

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69. *Id.*

CONCLUSION

Radiological safety is NRC's regulatory mission and area of expertise, and *amici curiae*, based on their knowledge and experience of the effectiveness of NRC's comprehensive licensing and oversight program, have full confidence that the Virginia legislature's concerns regarding the radiological safety of mill tailings disposal are unfounded. *Amici* therefore respectfully request that the Court reverse the judgment of the Fourth Circuit.

Respectfully submitted,

JAY E. SILBERG
Counsel of Record
SHEILA HARVEY
MICHAEL LEPRE
CYNTHIA COOK ROBERTSON
PILLSBURY WINTHROP SHAW PITTMAN LLP
1200 Seventeenth Street NW
Washington, DC 20036
(202) 663-8000
jay.silberg@pillsburylaw.com

Counsel for Amici Curiae

APPENDIX

APPENDIX — RELEVANT BACKGROUND AND EXPERIENCE OF *AMICI CURIAE*

L. Joseph Callan is a former NRC Executive Director for Operations. During his 19-year NRC career, Mr. Callan also served as Regional Administrator of NRC Region IV (Western United States), which provides regulatory oversight of most existing U.S. uranium mill and uranium mill tailings sites. He has a B.S. from the U.S. Naval Academy and undertook graduate studies in nuclear engineering at North Carolina State University.

Francis X. "Chip" Cameron is a former NRC Assistant General Counsel. During his 27-year career at NRC, Mr. Cameron also served as a Senior Attorney in the Office of the General Counsel, and as Deputy Director of the Office of the Licensing Support System. As Assistant General Counsel, Mr. Cameron advised NRC staff and the Commission on radioactive materials licensing issues, including the regulation of uranium mills and mill tailings, and the Agreement States program. Mr. Cameron has a B.A. and J.D. from University of Pittsburgh and a Masters of Natural Resources Management from University of Rhode Island.

Dr. Nils J. Diaz is a former NRC Commissioner and Chairman. He was appointed to the Commission in 1996 by President Bill Clinton, and by President George W. Bush to serve as Chairman of the Commission in 2003. During his two terms on the Commission, Dr. Diaz strongly promoted transparency for safety-significant issues, timelier decision-making, and a streamlined and effective regulatory processes. Prior to serving on the Commission,

Dr. Diaz was Professor of Nuclear Engineering Sciences at the University of Florida. Dr. Diaz holds a Ph.D. and M.S. in Nuclear Engineering Sciences from the University of Florida, and a B.S. in Mechanical Engineering from the University of Villanova, Havana. He has received formal training and practice in Nuclear Medicine and Health Physics and was licensed as a Senior Reactor Operator for 12 years by the NRC. He has published more than 70 refereed papers on national and international journals. He is a Fellow of the American Nuclear Society, the American Society of Mechanical Engineers and the American Association for the Advancement of Science.

John T. Greeves is a former Director of NRC's Division of Waste Management. During his 30-year NRC career, Mr. Greeves also served as Chief of the Uranium Recovery and Mill Tailings Branch and directed NRC's program for licensing, inspection, and regulation of the management, treatment, and commercial disposal of low-level nuclear waste, uranium recovery mill tailings sites remediation, and material facility and power reactor decommissioning. He also ensured that NRC developed consistent criteria for acceptable radioactive waste disposal, uranium recovery activities, and decommissioning. Mr. Greeves has a B.S. in Civil Engineering from University of Maryland.

Joseph R. Gray is a former NRC Associate General Counsel for Licensing and Regulation. During his 32-year NRC career, Mr. Gray managed the Office of General Counsel's Rulemaking and Fuel Cycle Division, responsible for the legal aspects of rulemaking and

regulation for uranium mills and mill tailings and State-NRC involvement in the oversight of uranium processing. He has a B.S. in nuclear engineering from Pennsylvania State University, an M.S. in nuclear engineering from Carnegie Mellon University, and a J.D. from Dickinson School of Law.

Dr. Malcolm R. Knapp is a former NRC Deputy Executive Director for Regulatory Effectiveness. During his 20-year NRC career, Dr. Knapp was also Deputy Director of the Office of Nuclear Materials Safety and Safeguards, where he was a founding co-chair of the Federal Government's Interagency Steering Committee on Radiation Standards, and Director of the Waste Management Division, where he oversaw all NRC headquarters activities for the regulation of uranium mills and mill tailings. Since retiring from NRC, Dr. Knapp has been an independent consultant in nuclear safety and management for clients including NRC, the U.S. Department of Energy, and the International Atomic Energy Agency. Dr. Knapp has B.E.S. and M.S.E. degrees from Johns Hopkins University and a Ph.D. in Chemical Engineering from Carnegie-Mellon University.

James Lieberman is a former NRC Director of Enforcement. During his 30-year NRC career, Mr. Lieberman also served as Assistant General Counsel for Enforcement and Regional Operations responsible for legal advice on issues relating to inspection and enforcement associated with uranium mills, processing, and waste management activities, and as Special Counsel

for Decommissioning and Waste Management. He has a B.S. in Mechanical Engineering from the University of Rhode Island, an M.S. in Thermal Engineering from Cornell University, and a J.D. from George Washington University.

Jeffrey S. Merrifield served two terms as an NRC Commissioner, from 1998 through 2008, appointed for his first term by President Bill Clinton and for his second term by President George W. Bush. Mr. Merrifield previously served as majority counsel and staff director of the Senate Subcommittee on Superfund, Waste Control, and Risk Assessment. He is currently a partner in Pillsbury Winthrop Shaw Pittman's Washington, DC office and co-leader of the firm's Energy practice. Mr. Merrifield has a B.A. from Tufts University and a J.D. from Georgetown University.

Ellis W. Merschoff is a former NRC Deputy Executive Director for Operations. During his 25-year NRC career, Mr. Merschoff also served as Region IV Regional Administrator, responsible for safety oversight of all uranium recovery, milling, and mill tailing management in the Western United States. He has a B.S. in Aerospace Engineering from the U.S. Naval Academy and an M.S. in Mechanical Engineering from the Massachusetts Institute of Technology. He is a registered professional engineer.

Appendix

C. William Reamer is a former Director of the High-Level Waste Repository Safety Division of NRC's Office of Nuclear Materials Safety and Safeguards. During his 25-year NRC career, Mr. Reamer also served as Deputy Director of the Division of Waste Management, responsible for regulating uranium recovery activities, including mill tailings management, and as an attorney in the Office of the General Counsel. He has a B.A. from Ohio University, a J.D. from Duke University, and an LL.M. from University of California at Berkeley.

Luis Reyes is a former NEC Executive Director for Operations. Mr. Reyes's 33-year NRC career covered multiple technical areas of nuclear regulation. He has a B.S. in Electrical Engineering and a M.S. in Nuclear Engineering from University of Puerto Rico.

Hugh L. Thompson, Jr. is a former NRC Deputy Executive Director for Regulatory Programs. Mr. Thompson's 25-year NRC career included over 10 years of direct-line oversight of uranium mills and mill tailings regulation. As Deputy Executive Director for Regulatory Programs, he was responsible for the inspection and enforcement activities of the uranium mills and mill tailings sites activities nationwide. He has a B.S. from the U.S. Naval Academy, an M.S. in Nuclear Engineering from Georgia Institute of Technology, and a J.D. from George Washington University.

Appendix

Dr. William D. Travers is a former NRC Executive Director for Operations. Dr. Travers served in various positions during his 30-year NRC career. As Executive Director for Operations, he managed all technical staff activities at NRC Headquarters and four Regional Offices, was responsible for the safety and security at 103 nuclear power plants across the U.S., and regulation of uranium mills and mill tailings. Dr. Travers has B.S., M.S., and Ph.D. degrees in Science and Nuclear Health Physics from Purdue University.

Martin Virgilio is a former NRC Deputy Executive Director for Operations. During his 35-year NRC career, he served in various staff, management, and executive positions including positions responsible for the safety of uranium recovery and processing operations associated with nuclear fuel manufacturing. Mr. Virgilio is now a consultant to nuclear power operators on nuclear, industrial, environmental and radiological safety. He graduated from the U.S. Merchant Marine Academy and completed postgraduate studies in nuclear engineering at Catholic University.

No. 16-1275

IN THE

Supreme Court of the United States

VIRGINIA URANIUM, INC., ET AL.,
Petitioners,

v.

JOHN WARREN, ET AL.,
Respondents.

On Writ of Certiorari to the United States Court of Appeals for the Fourth Circuit

BRIEF OF INDIANA, WASHINGTON, HAWAII, MARYLAND, MASSACHUSETTS, NEW JERSEY, OREGON, PENNSYLVANIA, RHODE ISLAND, AND TEXAS AS *AMICI CURIAE* IN SUPPORT OF RESPONDENTS

ROBERT W. FERGUSON
Attorney General of Washington
NOAH G. PURCELL
Solicitor General
KOALANI KAULUKUKUI-BARBEE
Assistant Attorney General

Office of the Attorney General
P.O. Box 40100
Olympia, Washington 98504
(360) 753-6200

CURTIS T. HILL, JR.
Attorney General of Indiana
THOMAS M. FISHER*
Solicitor General
KIAN J. HUDSON
JULIA C. PAYNE
Deputy Attorneys General

Office of the Attorney General
302 W. Washington Street
Indianapolis, Indiana 46204
(317) 232-6255
Tom.Fisher@atg.in.gov
**Counsel of Record*

Counsel for Amici *States*
Additional counsel with signature block

QUESTION PRESENTED

Whether the Atomic Energy Act preempts Virginia's moratorium on conventional uranium mining, an activity all parties agree the Act gives the federal government no authority to regulate.

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INTEREST OF THE *AMICI* STATES

The States of Indiana, Washington, Hawaii, Maryland, Massachusetts, New Jersey, Oregon, Pennsylvania, Rhode Island, and Texas respectfully submit this brief as *amici curiae* in support of the respondent.

Relying on the savings clause of the Atomic Energy Act (AEA), 42 U.S.C. § 2021(k), petitioners ask the Court to establish a rule requiring courts to investigate the purpose of *any* state law that regulates *any* activity *even in the absence* of a "clear and manifest" congressional intent to preempt state regulation of that activity. *Wyeth v. Levine*, 555 U.S. 555, 565 (2009). Such a rule would transform the AEA's savings clause, which plainly was designed as a mechanism to *expand* States' regulatory authority, into one that greatly *diminishes* it. *See* Pet. Br. 26.

Petitioners' theory not only ignores the text of the AEA, but also contradicts this and lower courts' decisions interpreting the statute, which hold that preemption turns on "whether 'the matter on which the state asserts the right to act is in any way regulated by the federal government.'" *Pacific Gas and Electric Company v. State Energy Resources Conservation and Development Commission*, 461 U.S. 190, 212–13 (1983) (quoting *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 236 (1947)).

In opposing petitioners' interpretive alchemy, the *amici* States have multiple interests at stake: (1) confining the scope of federal preemption to that intended by Congress; (2) safeguarding myriad state regulations—such as those related to hazardous waste—that could be jeopardized by petitioners' interpretation; and (3) limiting intrusive inquiries into lawmakers' subjective motivations.

SUMMARY OF THE ARGUMENT

I. Petitioners argue that the AEA preempts *any* state law that regulates for the purpose of protecting "against radiation hazards," regardless whether those laws regulate an activity over which the federal government has jurisdiction. Pet. Br. 31 (quoting 42 U.S.C. § 2021(k)). This theory is completely unsupported by the AEA's text. The AEA clearly provides that a party seeking preemption of a state law must first show that the law regulates an activity also regulated by the federal government. Only *then* does subsection 2021(k) come into play: 2021(k), the sole AEA provision referring to the "purposes" of state laws, will save such a state law if the law has a purpose "other than protection against radiation hazards." 42 U.S.C. § 2021(k).

II. The Court's precedents interpreting the AEA affirm the statute's plain meaning: The threshold requirement for preemption demands that the challenged state law regulate some activity also regulated by the federal government.

III. By dispensing with the threshold preemption requirement, petitioners' theory threatens numerous crucial state regulations, including regulations of hazardous waste.

IV. If the Court were to adopt petitioners' theory, *every* state law—no matter its age or subject matter—would be subjected to an intrusive inquiry into the motivations of its enactors. The Court should not impose such a burden on states in the absence of a clear statutory command. And whenever Congress requires such inquiries into legislative purpose, the Court should ensure that the judiciary treats them as questions of law, not questions of fact.

ARGUMENT

I. Petitioners' Theory Is Contradicted by the Text of the AEA

The Court's preemption doctrine is grounded in the Supremacy Clause, and "two cornerstones" gird its application. *Wyeth v. Levine*, 555 U.S. 555, 565 (2009); U.S. Const. art. VI, cl. 2. "First, 'the purpose of Congress is the ultimate touchstone in every preemption case.' " *Wyeth*, 555 U.S. at 565 (quoting *Medtronic, Inc. v. Lohr*, 518 U.S. 470, 485 (1996)). Second, courts must "'start with the assumption that the historic police powers of the states were not to be superseded by the Federal Act unless that was the clear and manifest purpose of Congress.' " *Wyeth*, 555 U.S. at 565 (quoting *Lohr*, 518 U.S. at 485).

"There is no federal pre-emption *in vacuo*, without a constitutional text or a federal statute to assert it," *Puerto Rico Dep't of Consumer Affairs v. Isla Petroleum Corp.*, 485 U.S. 495, 503 (1988), and congressional intent to preempt is therefore discerned from "the text and structure of the statute at issue," *CSX Transp., Inc. v. Easterwood*, 507 U.S. 658, 664 (1993) (*citing Shaw v. Delta Air Lines, Inc.*, 463 U.S. 85, 95 (1983)). Thus, to "wander far from the statutory text [is] inconsistent with the Constitution." *Wyeth*, 555 U.S. at 583 (Thomas, J., concurring in the judgment).

The AEA gives the federal government extensive authority to regulate activities related to nuclear energy, and state laws that purport to regulate these activities are generally preempted. But 2021(k)—which even the United States concedes is "framed as a 'savings clause,' " U.S. Cert. Br. 17–18—*saves* state laws that regulate an activity also regulated by the federal government so long as they have a non-radiation-hazard purpose.

Here, petitioners urge the Court to turn 2021(k) on its head: They would have the Court interpret the AEA to preempt *all* state laws enacted with the purpose of addressing concerns with "radiation hazards," *regardless of whether the activity the state seeks to regulate is also regulated by the federal government*. Pet. Br. 26. Such a test does not comport with the AEA's text.

A. No provision of the AEA authorizes petitioners' sweeping theory of preemption

Petitioners claim that the AEA preempts *all* state laws enacted with the purpose of addressing concerns with "radiation hazards" and maintain that states "may regulate *only* 'for *purposes* other than protection against radiation hazards.'" Pet. Br. 26 (quoting 42 U.S.C. § 2021(k)) (emphasis added). The United States would add a minor qualifier, that the AEA preempts a state law if its purpose is to address "radiation hazards *stemming from activities licensed under the statute*," U.S. Br. 12 (emphasis added). The United States' approach is utterly impracticable: It asks courts to determine not only whether a lawmaker was worried about hypothetical nuclear hazards, but also *which activities* generate those hypothetical nuclear hazards. More important, both theories are contradicted by the AEA's text.

Subsection 2021(k) is the only provision in the AEA that refers to the "purposes" of state law. Petitioners and the United States can either attempt to transform 2021(k) into an affirmative preemption clause or look for preemption elsewhere in the AEA. Both routes lead to absurdity.

1. Begin with the plain meaning of 2021(k). The provision reads in full: "*Nothing in this section shall be construed to affect the authority of any State or local agency to regulate activities* for purposes other than protection against radiation hazards." 42 U.S.C.

§ 2021(k) (emphasis added). It plainly limits how courts "construe[]" the other provisions of "this section": A state may regulate *notwithstanding* those other provisions so long as its reason for doing so is not "protection against radiation hazards." Thus, 2021(k)'s inquiry into the "purposes" of a state law applies only *after* the party challenging the state law makes the threshold showing that the state law regulates an activity the federal government regulates under the AEA.

Petitioners' arguments from canons of statutory interpretation do not undermine the straightforward meaning of the statutory text. Pet. Br. 33–34. Both the *expressio unius* and superfluity arguments are answered by other provisions of the AEA that could preempt some—but not all—state laws.

The *expressio unius* canon implies that *some* state regulations are permissible "only for purposes other than protection against radiation hazards." Pet. Br. 33 (internal citation and quotation marks omitted; emphasis removed). But the universe of state regulations to which this test applies includes only those regulations that otherwise fall within the scope of some *other* AEA provision. *See Pacific Gas*, 461 U.S. 190, 212–13 (internal quotation marks omitted) ("the test of preemption is whether the matter on which the state asserts the right to act is in any way regulated by the federal government.").

Consider, for example, the AEA's general prohibition against transferring or receiving "source material [e.g., uranium ore, 42 U.S.C. § 2014(z)] after removal from its place of deposit in nature." 42 U.S.C. § 2092. Under section 2092, no one may transfer or receive uranium ore without a license from the Nuclear Regulatory Commission. *Id.* The federal government thus regulates this activity. Yet states may, under 2021(k), regulate transfer of uranium ore in a way that does not conflict with federal regulation, so long as the purpose is *not* "protection against radiation hazards." 42 U.S.C. § 2021(k). And under subsection 2021(b), states may so regulate even for protection from radiation hazards if they secure an agreement from the Nuclear Regulatory Commission "discontinu[ing] its regulatory authority." *Id.* § 2021(b). The *expressio unius* canon supports the inference that these are the only ways states can regulate uranium ore transfer, but only because section 2092 regulates the transfer of uranium ore. Where, as here, a state's law does *not* regulate a matter also regulated by the federal government, 2021(b) and 2021(k) are irrelevant and petitioners' *expressio unius* argument has no application.

Similarly, petitioners' reliance on the canon against superfluity ignores that 2021(k) saves some state regulations that *are* preempted by other provisions of the AEA, such as section 2092. Far from "effectively excis[ing] Subsection (k) from the text," Pet. Br. 34, the plain-text meaning gives 2021(k) a crucial

role: It exempts state regulation of matters regulated by the federal government so long as their purpose is unrelated to concerns with radiation hazards.

The many decisions interpreting similar "nothing . . . shall be construed" provisions confirms that this one, like the others, is a savings clause. Courts routinely recognize that Congress uses this formulation to limit the effect—including the preemptive effect—of other provisions of a statute. *See, e.g., Kentucky Ass'n of Health Plans, Inc. v. Miller*, 538 U.S. 329, 333 (2003) (recognizing preemption "savings clause" in Employee Retirement Income Security Act); *Sec'y of the Interior v. California*, 464 U.S. 312, 341 n.21 (1984) (recognizing "savings clause" in Outer Continental Shelf Lands Act); *United States v. Menasche*, 348 U.S. 528, 529 (1955) (recognizing "savings clause" in Immigration and Nationality Act of 1952); *Merrick v. Diageo Americas Supply, Inc.*, 805 F.3d 685, 691 (6th Cir. 2015) (recognizing preemption savings clauses in Clear Air Act and Clean Water Act).

In sum, it is impossible to transmogrify 2021(k) into an affirmative preemption provision that invalidates all state laws adopted to address radiation hazards. Doing so requires considerable revisions, deleting the provision's first twelve words, changing the second "to" to "may," and adding an "only" after "activities":

> ~~Nothing in this section shall be construed to affect the authority of~~ any

> State or local agency ~~to~~ **may** regulate activities **only** for purposes other than protection against radiation hazards.

"[O]ur constitutional structure does not permit this Court to 'rewrite the statute that Congress has enacted.'" *Puerto Rico v. Franklin California Tax-Free Trust*, 136 S. Ct. 1938, 1949 (2016) (quoting *Dodd v. United States*, 545 U.S. 353, 359 (2005)). And in light of the frequency with which similar savings clauses limit preemption in other statutes, accepting this contortion would cast doubt on many state laws across many different policy areas. The Court should not do so here.

2. Because 2021(k) is a savings clause, the only way to reach petitioners' conclusion that "a State may regulate *only* 'for purposes other than protection against radiation hazards,' " Pet. Br. 33 (quoting 42 U.S.C. § 2021(k)), is to interpret the other provisions of the AEA to preempt *every* state law, only then to be saved by 2021(k), as limited by its purpose test. But to state this theory is to reject it: The AEA has never preempted all state laws in general, or even state regulation of uranium mining in particular.

No AEA provision explicitly displaces states' authority to regulate uranium mining, much less explicitly preempts all state laws. As the United States acknowledges, the AEA has no general "express-preemption provision." U.S. Cert. Br. 18. And it beggars belief to think that—without 2021(k) in place to

save laws with non-radiation-hazard purposes—earlier versions of the AEA preempted *all* state laws.

That leaves the 1959 Amendments that enacted 2021(k). And, other than a minor amendment to 42 U.S.C. § 2138, all of the 1959 Amendments are now codified at 42 U.S.C. § 2021. None of section 2021's subsections includes so much as a hint of congressional intent to preempt state regulation of uranium mining, much less an intent to preempt all state laws:

- (a) lists the statute's purposes;
- (b) authorizes the Commission to enter into agreements with states;
- (c) requires the Commission to retain authority over activities unrelated to uranium mining;
- (d) imposes requirements on Commission State agreements;
- (e) requires agreements to be published in the Federal Register;
- (f) authorizes the Commission to grant exemptions to licensing requirements and regulations;
- (g) directs the Commission to work with states in formulating standards;
- (h) directs the EPA to consult with experts regarding radiation matters;
- (i) authorizes the Commission to provide training and inspection assistance to the states with which it has agreements;

- (j) authorizes the Commission to suspend agreements to protect health and safety;
- (k) is the savings clause;
- (l) permits states to participate in licensing determinations;
- (m) says agreements with states do not affect the Commission's authority to protect the common defense;
- (o) imposes requirements on states' regulation of byproduct material.

There is thus no trace of preemption in the 1959 Amendments, which is unsurprising, for "the point of the 1959 Amendments was to *heighten* the states' role." *Pacific Gas*, 461 U.S. at 209 (emphasis added).

Ultimately, no support for petitioners' preemption theory exists in the text or structure of the AEA. The AEA does not preempt state regulation of uranium mining, and 2021(k)'s purpose test is therefore irrelevant. Petitioners' challenge to Virginia's uranium-mining moratorium should end there.

B. The presumption against preemption requires any doubts to be resolved in favor of state law

The text and structure of the AEA leave no doubt that 2021(k) is a savings clause, not an affirmative preemption clause. But even if there were doubt, the Court's precedents require resolving it in favor of Virginia's uranium-mining moratorium.

First, petitioners argue that the AEA preempts an extremely broad field of state regulation: all state laws with the purpose of addressing radiation hazards. Pet. Br. 26. But 2021(k), the AEA's savings clause, creates a presumption that the AEA does *not* preempt the field. Federal courts have regularly observed that the "existence of [a] preemption savings clause indicates that Congress did not intend to preempt the field." *Time Warner Cable v. Doyle*, 66 F.3d 867, 878 n.12 (7th Cir. 1995); *see also Johnson v. Am. Towers, LLC*, 781 F.3d 693, 703 (4th Cir. 2015) ("The savings clause demonstrates that congressional intent to completely preempt this area of law is neither clear nor manifest."). Subsection 2021(k) therefore creates a presumption against broad field preemption that neither petitioners nor the United States have overcome.

Second, and more fundamentally, the Court has said many times that it utilizes a presumption against preemption "[i]n all pre-emption cases, and particularly in those in which Congress has legislated . . . in a field which the States have traditionally occupied." *Wyeth*, 555 U.S. at 565 (quoting *Medtronic, Inc. v. Lohr*, 518 U.S. 470, 485 (1996) (alteration and ellipsis in original). In other words, the Court assumes "that the historic police powers of the States were not to be superseded by the Federal Act unless that was the clear and manifest purpose of Congress." *Id.* (quoting *Medtronic*, 518 U.S. at 485); *see also Arizona v. United States*, 567 U.S. 387, 400 (2012). "Thus,

when the text of a pre-emption clause is susceptible of more than one plausible reading, courts ordinarily 'accept the reading that disfavors pre-emption.'" *Altria Grp., Inc. v. Good*, 555 U.S. 70, 77 (2008) (quoting *Bates v. Dow Agrosciences LLC*, 544 U.S. 431, 449 (2005)). This presumption applies equally where, as here, the question is "the *scope* of [Congress's] intended invalidation of state law." *Medtronic*, 518 U.S. at 485.

The presumption against preemption has "particular[]" force here because the States have "traditionally occupied" the arena of land-use regulation generally and mining regulation specifically. *Wyeth*, 555 U.S. at 565. Virginia's uranium-mining moratorium is effectively a regulation of the use of land in Virginia, and the Court has long recognized that "[r]egulation of land use . . . is a quintessential state and local power." *Rapanos v. United States*, 547 U.S. 715, 738 (2006). And even with respect to mining specifically, Congress has recognized that "because of the diversity in terrain, climate, biologic, chemical, and other physical conditions in areas subject to mining operations, the primary governmental responsibility for developing, authorizing, issuing, and enforcing regulations for surface mining . . . should rest with the States." 30 U.S.C. § 1201(f). To this day the federal government still does not regulate uranium mining. *See* Pet. Br. 45; U.S. Br. 14. It can hardly be said, therefore, that the AEA displaces states' traditional regulatory authority.

Neither petitioners nor the United States has articulated preemption theories consistent with the text of the AEA. And they certainly have not shown that the AEA evinces a "clear and manifest purpose of Congress" to preempt every state law adopted with the purpose they claim is forbidden. *Wyeth*, 555 U.S. at 565. Accordingly, no basis exists for declaring Virginia's uranium-mining moratorium to be preempted.

II. Petitioners' Theory Misreads the Cases Interpreting the AEA

A. This and lower courts have recognized AEA preemption only of state laws that regulate an activity also regulated by the federal government

The decisions interpreting the AEA affirm the straightforward interpretation articulated above: A state law is field-preempted by the AEA if the state law regulates an activity regulated by the federal government under the AEA, and, so long as the law does not directly conflict with federal law, subsection 2021(k) will *save* a state law from preemption if it has a purpose "other than protection against radiation hazards." 42 U.S.C. § 2021(k).

1. The Court announced this test in its first case addressing preemption under the AEA, *Pacific Gas and Electric Company v. State Energy Resources Conservation and Development Commission*, 461 U.S. 190 (1983). There, it held that "the test of preemption is

whether 'the matter on which the state asserts the right to act is in any way regulated by the federal government.' " *Id.* at 212–13 (quoting *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 236 (1947)).

The United States disputes that *Pacific Gas* required the party favoring preemption to show that the activity at issue is "regulated by the federal government." *Id.* In support of this position it argues that the challenged law "barr[ed] construction of nuclear power plants [and] did not directly regulate a subject committed to [the Nuclear Regulatory Commission's] regulatory authority[.]" U.S. Br. 25 (internal emphasis omitted). This is incorrect. The Nuclear Regulatory Commission regulates the construction of power plants, *see* 42 U.S.C. § 2235, and *Pacific Gas* observed that the Nuclear Regulatory Commission specifically determined "that nuclear construction may proceed notwithstanding extant uncertainties as to waste disposal," *Pacific Gas*, 461 U.S. at 213. Indeed, only *after* reaching this conclusion did the Court deem it "necessary to determine whether there [wa]s a non-safety rationale for" the law. *Id.*

The Court applied this holding in *Silkwood v. Kerr-McGee Corporation*, 464 U.S. 238 (1984), where it addressed the AEA's possible preemption of state tort remedies for radiation injuries. The Court acknowledged that "[i]f there were nothing more . . . [than the AEA's] foreclosure of the states from conditioning the operation of nuclear plants on compliance

with state-imposed safety standards," these state tort remedies arguably would fall within the preempted field. *Id.* at 250–51. But there *was* more. The AEA's text—in particular "Congress' failure to provide any federal remedy for persons injured by such conduct"—and the history of other congressional actions in the nuclear energy sphere—provided "ample evidence that Congress had no intention of forbidding the states from providing" such remedies. *Id.* at 250–51. The federal government, therefore, had not "so completely occupied the field of safety that state remedies are foreclosed . . . ." *Id.* at 256.

The Court reaffirmed this test and further narrowed "the preempted field of nuclear safety as that field has been defined in prior cases" in *English v. General Electric Company*, 496 U.S. 72, 90 (U.S. 1990), a preemption challenge to state intentional infliction of emotional distress claims arising from violations of AEA whistleblower provisions, *id.* at 78. The Court found "no evidence of the necessary 'clear and manifest' intent on the part of Congress" to preempt those tort claims. *Id.* at 83.

2. Consistent with *Pacific Gas*, *Silkwood*, and *English*, the Circuits are united in requiring, as a threshold inquiry, that state laws challenged under the AEA touch on some activity "in any way regulated by the federal government." *Pacific Gas*, 461 U.S. at 212–13.

In *Skull Valley Band of Goshute Indians v. Nielson*, the Tenth Circuit recognized that "[i]n each instance, the question of preemption is one of determining Congressional intent." 376 F.3d 1223, 1240 (10th Cir. 2004) (citing *Wardair Canada Inc. v. Fla. Dep't of Revenue*, 477 U.S. 1, 6 (1986)). Discerning such intent from the AEA and the Nuclear Waste Policy Act, the Tenth Circuit concluded that spent nuclear fuel storage is an activity regulated by the federal government. *Id.* at 1242. Utah's challenged laws, ostensibly enacted to regulate matters traditionally within state control (e.g., licensing, county planning, and roads), were preempted because they "address matters of radiological safety *that are addressed by federal law* and that are the *exclusive* province of the federal government." *Id.* at 1246 (emphasis added).

The Second Circuit in *Entergy Nuclear Vermont Yankee LLC v. Shumlin*, 733 F.3d 393, 408–09 (2d Cir. 2013), likewise recognized that its "'task is to ascertain Congress' intent in enacting the federal statute at issue.'" (quoting *Shaw v. Delta Air Lines Inc.*, 463 U.S. 85, 95 (1983)). Assured that the challenged Vermont laws addressed matters regulated by the federal government—nuclear waste storage, plant operation, and state inspections at the Vermont Yankee nuclear power plant—the Second Circuit held that the laws were preempted because Vermont lacked a "non-safety rationale" in enacting them. *Id.* at 415 (quoting *Pacific Gas*, 461 U.S. at 213)).

3. Each of the decisions cited by petitioners and *amici* also required the challenged state laws to touch on some matter regulated by the federal government. *United States v. Manning*, 527 F.3d 828, 838 (9th Cir. 2008) and *United States v. Kentucky*, 252 F.3d 816, 823 (6th Cir. 2001) (concerning materials regulated by the AEA); *Me. Yankee Atomic Power Co. v. Me. Pub. Util. Comm'n*, 581 A.2d 799, 803 (Me. 1990) (concerning nuclear power plant decommissioning); *Long Island Lighting Co. v. Suffolk Cty., N.Y.*, 628 F. Supp. 654, 664 (E.D.N.Y. 1986) (concerning nuclear emergency response testing); *Suffolk Cty. v. Long Island Lighting Co.*, 728 F.2d 52, 57-58 (2d Cir. 1984) (concerning design, construction, and operation of a nuclear power plant); *Conn. Yankee Atomic Power Co. v. Town of Haddam Planning & Zoning Comm'n*, 19 Fed. App'x 21, 22 (2d Cir. 2001) (concerning a nuclear waste storage facility); *Me. Yankee Atomic Power Co. v. Bonsey*, 107 F. Supp. 2d 47, 53 (D. Me. 2000) (concerning the storage of spent nuclear fuel).

The cases cited by petitioners and *amici* outside the AEA context likewise require a showing of specific congressional intent to preempt state law. *Wyeth*, 555 U.S. at 565. *See, e.g., AT&T Mobility LLC v. Concepcion*, 563 U.S. 333, 344 (2011) (Federal Arbitration Act, enacted "to ensure the enforcement of arbitration agreements according to their terms so as to facilitate streamlined proceedings," preempted California's judicial rule "[r]equiring the availability of classwide arbitration"); *Oneok Inc. v. Learjet Inc.*, 135 S. Ct. 1591,

1599 (2015) (where "the Natural Gas Act was drawn with meticulous regard for the continued exercise of state power," state antitrust claims against natural gas traders are not preempted); *Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293, 308–09 (1988) (preempting "a state law whose central purpose is to regulate maters that Congress intended FERC to regulate"); *Howlett v. Rose*, 496 U.S. 356, 383 (1990) (preempting school officials' state sovereign immunity defense because "as to persons that Congress subjected to liability, individual States may not exempt such persons from federal liability by relying on their own common-law heritage"); *Allis-Chalmers Corp. v. Lueck*, 471 U.S. 202, 219 (1985) (preempting state tort claim because "Congress intended [Labor Management Relations Act] § 301 to pre-empt this kind of derivative tort claim").

B. Because the federal government does not regulate conventional uranium mining, Virginia's moratorium is not preempted

The Atomic Energy Act of 1946 gave the federal government a monopoly on the generation of nuclear power, and, like the current AEA, required a license to "transfer . . . source material," but limited the licensure requirement to activity taken only "*after* [source material's] removal from its place of deposit in nature." The Atomic Energy Act of 1946, Pub. L. No. 79-585 § 5(b)(2), 60 Stat. 761 (1946) (emphasis added). The subsequent statute, the Atomic Energy Act of

1954, withdrew the federal government's monopoly on nuclear power, but still required a license to "transfer . . . any source material," again applying that requirement only "*after* [source material's] removal from its place of deposit in nature." The Atomic Energy Act of 1954, Pub. L. No. 83-703 § 62, 68 Stat. 932 (1954) (emphasis added). This limitation on the federal government's jurisdiction continues to this day. *See* 42 U.S.C. § 2092.

Indeed, as petitioners and supporting *amici* concede, uranium mining is an activity necessarily preceding uranium's "removal from its place of deposit in nature," and therefore no AEA provision explicitly displaces state authority to regulate uranium mining. *See* Pet. Br. 45 ("[T]he mining of uranium [is] an activity beyond the [Nuclear Regulatory Commission's] jurisdiction."); U.S. Br. 14 (acknowledging "uranium mining . . . is outside the [Nuclear Regulatory Commission's] jurisdiction").

Because the federal government does not regulate conventional uranium mining, the Fourth Circuit correctly held that petitioners' challenge to Virginia's uranium mining moratorium must end there. *Va. Uranium*, 848 F.3d at 599.

III. Petitioners' Theory Could Jeopardize State Laws Congress Has Expressly Authorized

Accepting petitioners' preemption theory and discarding the threshold requirement of common-activity regulation would do more than produce the wrong result here; it could jeopardize other important state laws, including those Congress has expressly authorized states to adopt.

Again, petitioners argue that AEA preemption turns entirely on the purpose of a state law, regardless whether "the matter on which the state asserts the right to act is in any way regulated by the federal government." *Pacific Gas*, 461 U.S. at 212–13. Such an expansive, non-textual theory of AEA preemption would jeopardize, for example, state hazardous waste laws authorized by the Resource Conservation and Recovery Act (RCRA), which establishes "cradle to grave" regulation of hazardous waste. *See generally* 42 U.S.C. §§ 6901–6992(k); § 6926(b). Forty-eight states administer RCRA-authorized hazardous waste programs in lieu of RCRA. *See e.g.*, Ala. Code ch. 22-30; Ariz. Rev. Stat. tit. 49, ch. 5; Ark. Code Ann. §§ 8-7-201, *et seq.*; Cal. Health and Safety Code div. 20, ch. 6.5; Colo. Rev. Stat. ch. 25-15; Ind. Code § 13-22-2-1; Idaho Code ch. 39-4401; Ky. Rev. Stat. ch. 224.46; Nev. Rev. Stat. §§ 459.400, *et seq.*; Ohio Rev. Code ch. 3734; Or. Rev. Stat. chs. 465, 466; Wash. Rev. Code ch. 70.105.)

Such programs require "facilities" that treat, store, or dispose of hazardous waste to obtain permits. 42 U.S.C. § 6925(a). A facility's permit defines prescriptive engineering and operating standards and includes facility-specific terms and conditions the "State Director determines necessary to protect human health and the environment." 40 C.F.R. § 270.32(b)(2). Facility permits also provide standards for the "closure" of the facility and require "corrective action" (cleanup) for any releases during the facility's life. *See* 40 C.F.R. § 264.111.

These requirements apply with equal force if a facility manages hazardous waste that contains AEA material. Although RCRA's definition of "solid waste" specifically excludes AEA material, *see* 42 U.S.C. § 6903(27), when non-radioactive hazardous waste blends with AEA material, the resulting "mixed waste" *is* subject to RCRA by virtue of RCRA's application to the "hazardous" component of the waste. *See, e.g.*, EPA Notice: State Authorization to Regulate the Hazardous Components of Radioactive Mixed Wastes Under the Resource Conservation and Recovery Act, 51 Fed. Reg. 24,504 (July 3, 1986); DOE Final Rule: Radioactive Waste; Byproduct Material, 52 Fed. Reg. 15,937 (May 1, 1987); EPA Clarification Notice: Clarification of Interim Status Qualification Requirements for the Hazardous Components of Radioactive Mixed Waste, 53 Fed. Reg. 37,045 (Sept. 23, 1988). In fact, EPA will authorize a state hazardous waste program only if the state has authority to "regulate the

hazardous components of radioactive mixed wastes." 51 Fed. Reg. at 24,504 (internal citations and quotation marks omitted).

Because of the commingled nature of mixed waste, regulation of the RCRA portion necessarily has an incidental effect on the waste that would otherwise be regulated by the AEA. Regulations concerning the closure of tanks, for instance, require adherence to performance standards for waste removal and decontamination. *See* 40 C.F.R. § 264.111, –.197. Similarly, hazardous waste that is "land disposal restricted" must be treated to specific standards before disposal. *See, e.g.*, 40 C.F.R. § 268.40 (treatment standard for "[r]adioactive high level wastes generated during the reprocessing of fuel rods" is "vitrification"). To the extent these standards apply to RCRA waste, AEA material unavoidably will be affected as well.

Congress has expressly ratified this incidental, but substantial, regulation. In 1992, Congress enacted the Federal Facility Compliance Act (FFCA) (Pub. L. No. 102-386, Title I, § 102(a), (b), 106 Stat. 1505, 1506 (Oct. 6, 1992)), which is codified in RCRA.

Courts have recognized that the preempted "field" under the AEA excludes states' regulation of the RCRA component of mixed waste. *See United States v. Kentucky*, 252 F.3d 816, 823 (6th Cir. 2001) (RCRA and the AEA provide the federal government "exclusive authority to regulate the radioactive component

of waste mixtures, whereas EPA—or states authorized by EPA under the RCRA—retain the authority to regulate the hazardous portion."); *United States v. Manning*, 527 F.3d 828, 833 (9th Cir. 2008); *Legal Envtl. Assistance Found. Inc. v. Hodel*, 586 F. Supp. 1163, 1167 (E.D. Tenn. 1984).

Under petitioners' preemption theory, all of these state hazardous waste laws could be challenged and—even though facially valid—subjected to examination for improper purpose at the mere suggestion of a state's underlying concern with "radiation hazards." Petitioners' test would also open the door to preemption defenses every time a state issues penalties pursuant to its RCRA-authorized laws to facilities that manage hazardous waste with an AEA material component.

Courts "should not become embroiled in attempting to ascertain" the "true motive" of a state. *Pacific Gas*, 461 U.S. 190, 216. But under petitioners' test, courts would be forced to conduct resource-intensive evidentiary hearings to determine whether a state had an improper intent each time a state's hazardous waste law is challenged. And if a challenger manages to show that a state did have radiation hazards in mind, its law would be preempted, despite Congress' intent to maintain the "dual regulatory scheme" for the regulation of mixed waste established by RCRA and the AEA. *United States v. Kentucky*, 252 F.3d at

823. A void would occur in an area Congress intended and expressly authorized the states to fill.

Similarly here, preemption of Virginia's uranium mining moratorium would create a regulatory void in an area traditionally reserved to the states and not otherwise regulated by the federal government. *See Va. Uranium*, 848 F.3d at 596. The Fourth Circuit correctly considered the threshold question whether uranium mining is regulated under the AEA. Concluding that uranium mining is not "in any way regulated by the federal government[,]" the Fourth Circuit properly ended its inquiry and upheld Virginia's ban. *Va. Uranium*, 848 F.3d at 596 (quoting *Pacific Gas*, 461 U.S. at 212–13) (internal citations omitted). This approach is consistent with the Court's precedents and should be affirmed.

IV. The Court Should Not Expand Inquiries into a State's Purpose

A. The Court should not impose an inquiry into a state's purpose unless Congress has expressly required it

In addition to the textual, doctrinal, and practical problems discussed above, petitioners summarily dismiss the extent of intrusion into states' sovereignty created by their interpretation of the AEA. The Court has adopted its "clear and manifest purpose" test "because the States are independent sovereigns in our

federal system," and preemption is "a serious intrusion into state sovereignty." *Medtronic, Inc. v. Lohr*, 518 U.S. 470, 485, 488 (1996). The degree of intrusion threatened by judicial inquiry into legislative purpose makes a presumption against petitioners' position—and a requirement of an express statement from Congress—doubly appropriate here.

Petitioners urge the Court to treat 2021(k)'s purpose test as if it encompasses *all* state laws. And they ask the Court to conduct this inquiry by looking past the text of Virginia's moratorium on uranium mining, which "*facially purport[s]* to regulate a matter outside the [Nuclear Regulatory Commission's] jurisdiction." Br. 40 (emphasis in original). Indeed, petitioners urge the Court to permit a *jury* to investigate the Virginia legislature's "true purpose." *Id.* at 41. Construing the AEA this way would greatly expand "judicial inquiries into legislative or executive motivation," and these inquires "represent a *substantial intrusion* into the workings of other branches of government." *Vill. of Arlington Heights v. Metro. Hous. Dev. Corp.*, 429 U.S. 252, 268 n.18 (1977) (emphasis added).

A straightforward—and correct—interpretation of subsection 2021(k) confines such inter-branch intrusion to a small set of laws, and only when a state chooses to try to save a law that regulates an activity also regulated by the federal government under the AEA. Petitioners' interpretation, on the other hand, imposes intrusive judicial inquiries into the "actual"

purpose behind numerous state laws. Indeed, if the facial subject matter of a state law cannot save it from preemption, then literally *any* state law could be challenged in search of an improper purpose lurking somewhere in the mind of a key legislator or regulator.

The Court should never presume that Congress has authorized an expansive intrusion into the actual motivations of state officials. Whether in the preemption context or any other, before imposing on states a judicial inquiry into actual purpose, the Court should require, at the very least, a "clear and manifest" statement of Congress's intent that it do so. *Medtronic*, 518 U.S. at 485. And because the AEA's text does not even suggest such an intent—much less explicitly articulate it—petitioners' interpretation of the AEA should be rejected.

B. Questions of state purpose should be treated as questions of law, not fact

The intrusiveness of petitioners' preemption theory is exacerbated by their unsupported assumption that an inquiry into the "purposes" of a state regulation under subsection 2021(k) should be treated as a question of fact. In attempting to demonstrate the purpose of Virginia's uranium mining moratorium, petitioners cite statements made in 1984, after the moratorium had been adopted, by members of a study group who opposed lifting the moratorium, *see* Pet.

Br. 17–18, and statements made in 2013 by state legislators who voted to retain the moratorium, *id.* at 18–19. These statements, of course, are relevant only if the purpose of Virginia's moratorium is a factual question—although even then it is not clear why the statements are probative, for none were made by the legislators who actually enacted the challenged law.

Petitioners are wrong to treat the question of the moratorium's purpose as a factual one. That approach is inconsistent with how federal courts approach preemption questions, and it creates serious practical problems.

In *Pacific Gas*, the Court specifically refused to "become embroiled in attempting to ascertain California's true motive." *Pacific Gas*, 461 U.S. at 216. And federal courts have consistently dismissed requests to peer into lawmakers' inner motivations in other preemption contexts as well. *See, e.g., Bldg. Indus. Elec. Contractors Ass'n v. City of New York*, 678 F.3d 184, 191 (2d Cir. 2012) ("[W]hen a court assesses whether a governmental policy has a regulatory purpose, it looks primarily to the objective purpose clear on the face of the enactment, not to allegations about individual officials' motivations in adopting the policy."); *N. Ill. Chapter of Associated Builders & Contractors, Inc. v. Lavin*, 431 F.3d 1004, 1007 (7th Cir. 2005) ("Federal preemption doctrine evaluates what legislation does, not why legislators voted for it or what political coalition led to its enactment."); *Colfax*

Corp. v. Illinois State Toll Highway Auth., 79 F.3d 631, 635 (7th Cir. 1996) (refusing to "go behind the contract to determine whether [a state highway authority's] real, but secret, motive was to regulate labor").

As the Court observed in *Pacific Gas*, courts treat legislative purpose as a question of law because an "inquiry into legislative motive is often an unsatisfactory venture." 461 U.S. at 216. Such inquiries are difficult because, as the Court has pointed out "on so many prior occasions[,] . . . it is often 'difficult or impossible for any court to determine the 'sole' or 'dominant' motivation behind the choices of a group of legislators.'" *Bush v. Vera*, 517 U.S. 952, 1014 n.9 (1996) (Stevens, J., dissenting) (quoting *Palmer v. Thompson*, 403 U.S. 217, 225 (1971)); *see also United States v. O'Brien*, 391 U.S. 367, 384 (1968) (observing that these inquiries "are a hazardous matter" because "[w]hat motivates one legislator to make a speech about a statute is not necessarily what motivates scores of others to enact it").

With statutory interpretation, courts may *occasionally* struggle to determine which of two mutually contradictory meanings a legislature intended; but with investigating a law's purpose, they nearly *always* find it impossible to determine with any confidence whether a statute was borne of a forbidden motive. A legislator "can quite consistently intend" to ad-

vance multiple purposes, including a forbidden purpose, "and evidence of a sort available only to the Almighty would be needed to sort them out or to assign them relative weights." John Hart Ely, *Legislative and Administrative Motivation in Constitutional Law*, 79 Yale L.J. 1205, 1214 (1970).

Focusing on the factual question of the legislature's "true" purpose also creates the possibility of differential treatment of identical laws: "[O]ne State's statute could survive pre-emption . . . while another State's identical law would not, merely because its authors had different aspirations," or perhaps simply because of a lack of evidence. *Shady Grove Orthopedic Assocs., P.A. v. Allstate Ins. Co.*, 559 U.S. 393, 404 (2010). This problem can arise even in the context of a single legislature, for a state law could be invalidated and then "reenacted in its exact form if the same or another legislator made a 'wiser' speech about it." *O'Brien*, 391 U.S. at 384. In addition to its impracticality, such differential treatment seriously undermines the "'fundamental principle of equal sovereignty' among the States." *Shelby Cty., Ala. v. Holder*, 570 U.S. 529, 544 (2013) (quoting *Nw. Austin Mun. Util. Dist. No. One v. Holder*, 557 U.S. 193, 203 (2009)).

These problems are further intensified in the many states, including Indiana, that do not publish legislative debates. *See Shell Oil Co. v. Meyer*, 705 N.E.2d 962, 974 (Ind. 1998) ("Indiana publishes only

sparse legislative history."); *Millikan v. U.S. Fid. & Guar. Co.*, 619 N.E.2d 948, 951 (Ind. Ct. App. 1993) ("In states like Indiana that preserve no legislative debate and comment we must often speculate as to why particular provisions may have been enacted."). Without written documentation of legislative debates, determining precisely what motivated a legislature becomes nearly impossible, particularly where, as here, the law at issue was passed several decades earlier. The only remaining option is to obtain sworn testimony from long-since-retired state lawmakers, if they are even around. Requiring such absurd inquiries into the psyches of former state legislators is the logical consequence of petitioners' "actual motive" theory; one can scarcely imagine a starker intrusion into state sovereignty.

***

Petitioners urge the Court to ignore its precedents and transform AEA subsection 2021(k) from a savings clause into a provision authorizing preemption of *any* state law adopted to address radiation hazards. In doing so, petitioners run roughshod over the AEA's text, the cases interpreting it, the practical consequences of adopting their theory, and the presumptions the Court traditionally exercises in preemption and legislative-purpose cases. The Court should reject petitioners' request to revise the statute Congress has written.

CONCLUSION

For these reasons, the judgment of the Fourth Circuit Court of Appeals should be affirmed.

Respectfully submitted,

ROBERT W. FERGUSON
Attorney General of
Washington

NOAH G. PURCELL
Solicitor General
KOALANI KAULUKUKUI-
BARBEE
Assistant Attorney
General

Office of the
Attorney General
P.O. Box 40100
Olympia, Washington
98504
(360) 753-6200

CURTIS T. HILL, JR.
Attorney General of
Indiana

THOMAS M. FISHER*
Solicitor General
KIAN J. HUDSON
JULIA C. PAYNE
Deputy Attorneys General

Office of the
Attorney General
302 W. Washington Street
IGC South, Fifth Floor
Indianapolis, Indiana 46204
(317) 232-6255
Tom.Fisher@atg.in.gov

**Counsel of Record*

Counsel for Amici *States*

Dated: September 4, 2018

ADDITIONAL COUNSEL

RUSSELL A. SUZUKI
Attorney General
State of Hawaii

ELLEN F. ROSENBLUM
Attorney General
State of Oregon

BRIAN E. FROSH
Attorney General
State of Maryland

JOSH SHAPIRO
Attorney General
Commonwealth of
Pennsylvania

MAURA HEALEY
Attorney General
Commonwealth of
Massachusetts

PETER F. KILMARTIN
Attorney General
State of Rhode Island

GURBIR S. GREWAL
Attorney General
State of New Jersey

KEN PAXTON
Attorney General
State of Texas

Counsel for Amici *States*

Dated: September 4, 2018

No. 16-1275

In The Supreme Court of the United States

VIRGINIA URANIUM, INC., *et al*, *Petitioners*,

v.

JOHN WARREN, *et al.*, *Respondents*.

On Writ of Certiorari to the United States Court of Appeals for the Fourth Circuit

Brief *Amici Curiae* in Support of Respondents for the Members of the Southern Virginia Delegation to the Virginia General Assembly, Local Chambers of Commerce, Civic, Trade, and Economic Development Associations, and Municipalities

Anthony F. Troy
Patrick Callahan
Eckert Seamans
Cherin & Mellott, LLC
919 E Main St., Suite 1300
Richmond, VA 23219
(804) 788-7740

Cale Jaffe
Counsel of Record
Director, Environmental
and Regulatory Law Clinic
University of Virginia School of Law
580 Massie Road
Charlottesville, VA 22903
(434) 924-4776

Counsel for Amici Curiae

LANTAGNE LEGAL PRINTING
801 East Main Street Suite 100 Richmond, Virginia 23219 (800) 847-0477

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STATEMENT OF INTEREST OF *AMICI*[1]

Together, the organizational *amici* represent business and community leaders throughout Southern Virginia with a long and demonstrated commitment to improving economic opportunities in the region. *Amici* have worked for decades to create jobs and ensure economic success, while preserving the high quality of life that citizens in the region have come to expect. They have developed an economic vision for the region that is premised on agriculture, tourism, motorsports, and the natural scenic beauty of Southern Virginia. Specifically, the chambers of commerce *amici* represent businesses in Pittsylvania County (where the Coles Hill Deposit is located) and in adjacent municipalities. These businesses have long expressed concerns about a large-scale mining project due to volatility in the global uranium market, which would threaten job creation and economic vitality for the region.

The elected official *amici* represent legislative districts in the Virginia General Assembly that cover Pittsylvania County where the Coles Hill Deposit is located, along with all or part of several adjacent cities and counties throughout Southern Virginia. Other jurisdictions within these legislative districts include all or part of the City of Danville and

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[1] The parties have filed letters with the Clerk indicating blanket consent to the filing of *amicus* briefs. No counsel for any party authored this brief in whole or in part, and no person or entity other than above-named *amici curiae* and their counsel made a monetary contribution intended to fund its preparation or submission.

Pittsylvania County, and three counties directly adjacent to Pittsylvania: Halifax, Henry, and Campbell Counties, as well as the City of Martinsville. All or part of several additional Counties are also within the legislative districts of *amici*: Amelia, Brunswick, Carroll, Charlotte, Dinwiddie, Franklin, Mecklenburg, Lunenburg, Prince Edward, Prince George, and Nottoway Counties, and the City of Galax.

A detailed description of all *amici curiae* is provided in the Appendix to this brief.

SUMMARY OF ARGUMENT

Members of the Virginia General Assembly, local Chambers of Commerce, and other civic associations included here as *amici* support the Commonwealth's moratorium on uranium mining largely because of concerns that the mining industry would threaten job security for the region. The economic concerns of *amici* serve legitimate State interests and are not preempted by the Atomic Energy Act.

The text of the Atomic Energy Act, 42 U.S.C. § 2011 *et seq.* ("AEA" or "the Act") explicitly leaves to the States the authority to regulate uranium "prior to removal from its place of deposit in nature." 42 U.S.C. § 2095 (2018). Thus, the question of how to regulate conventional uranium mining—or whether to ban it altogether—falls outside of the purview of the Nuclear Regulatory Commission ("NRC"). The NRC has historically recognized as much, declining to regulate "radioactive air emissions from debris left

over from unlicensed conventional mining activities" as lying "beyond the scope of the Atomic Energy Act." *In re: Hydro Res., Inc.*, 63 N.R.C. 510, 515 (2006).

Given the lack of NRC authority over conventional mining, Petitioners ask this Court to impose a remedy that would require the Commonwealth to develop its own uranium mining regulations. *See* Part I, *infra*. Yet it cannot be the case that federal courts would interpret the AEA to require state regulation of uranium mining when Congress itself could not impose that command on the States. "No matter how powerful the federal interest involved, the Constitution simply does not give Congress the authority to require the States to regulate." *New York v. United States*, 505 U.S. 144, 178 (1992).

What is more, concerns about conventional uranium mining *qua* mining supported Virginia's decision to adopt the moratorium in 1982, and to extend the moratorium indefinitely in 1983. *See* Part II, *infra*. The 1983 Virginia Acts of Assembly included language stating that the legislature, based on a preliminary study from the time period, had "not identified any environmental or public health concern that could preclude uranium development in Virginia." Act of Feb. 24, 1983, ch. 3, 1983 Va. Acts 3 (codified at VA. CODE ANN. § 45.1-283 (2018)). The 1983 legislative enactment also referenced "local concerns," "socioeconomic effects of the uranium development activity at the specific site," and the need for greater analysis of "the costs and benefits"

of allowing uranium mining in Southern Virginia. *Id.*; Pet'rs' App. 178a, 187a-88a.

The economic factors evident in 1983 remain in the market today. A report from the National Academy of Sciences ("NAS") indicates that uranium mining has historically been a boom-and-bust industry. *See* Part III, *infra*. Prices spiked in the 1970s, but suffered a steep and sustained decline throughout the 1980s and 1990s. For many years, the spot price for yellowcake remained at or below $20 per pound when adjusted for inflation. Today, spot prices remain near $25. These numbers are significant because Petitioner Virginia Energy Resources, Inc. has confirmed in filings with Canadian securities officials that the Coles Hill Deposit would be uneconomic to mine absent a far higher price for uranium. *See* Part III, *infra*. The data are especially concerning to *amici*, who are wary of volatility in the uranium mining industry, which could leave behind a shuttered mine and a weakened local economy.

Finally, local chambers of commerce and other economic development associations have relied on Petitioners' acquiescence to the legitimacy of Virginia's moratorium. *See* Part IV, *infra*. In columns published in regional newspapers, Petitioner Virginia Uranium, Inc. pledged that if "the NAS finds that uranium mining cannot be done safely, we will obviously not pursue lifting the

moratorium."[2] Petitioners relied on this pledge as they continued work to build a stable economy premised on agriculture, tourism, education, and other complimentary businesses. The doctrine of laches "may bar long-dormant claims for equitable relief." *City of Sherrill, N.Y. v. Oneida Indian Nation of New York*, 544 U.S. 197, 217 (2005). Given the reasonable likelihood of economic harm to *amici* if Virginia's moratorium were nullified, the laches doctrine is applicable here.

ARGUMENT

I. *Pacific Gas* and this Court's Preemption Jurisprudence Mandate Deference to Virginia's Exercise of its State Sovereignty.

The text of the AEA leaves to the States the question of how to regulate conventional uranium mining—or whether to ban it altogether. *See* 42 U.S.C. §2092 (2018) (granting NRC authority over "source material"[3] "after removal from its place of deposit in nature"); *see also* 42 U.S.C. § 2095 (2018) (declaring that reports on the "handling of source material" shall not be required by the NRC "prior to removal from its place of deposit in nature").

Faced with this statutory language, Petitioners premise their challenge to Virginia's moratorium on

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[2] Walter Coles, *Uranium Company Renews Pledge to Protect Virginians*, VIRGINIAN-PILOT, Mar. 27, 2011, at 8 (Hampton Roads Section).

[3] The Act defines "source material" to include uranium. 42 U.S.C. § 2014(z) (2018).

conventional uranium mining on a gross misreading of *Pacific Gas and Elec. Co. v. State Energy Res. Conservation and Dev. Comm'n*, 461 U.S. 190 (1983). Yet the *Pacific Gas* Court unanimously upheld the legitimacy of a California law that imposed a state moratorium on the construction of new nuclear power plants until the federal government had met its obligations under the AEA to ensure that "there exists a demonstrated technology or means for the disposal of high-level nuclear waste." 461 U.S. at 198.

In *Pacific Gas*, the Court delineated a line between federal and state authority with respect to nuclear power construction: "States retain their traditional responsibility in the field of regulating electrical utilities for determining questions of need, reliability, cost and other related state concerns." *Id.* at 205. In this context, "the test of preemption is whether 'the matter on which the state asserts the right to act is in any way regulated by the federal government.'" *Id.* at 213 (quoting *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 230 (1947)). The Court only embarked upon the search for a "non-safety rationale" for California's law *after* determining that the plain text of the statute touched upon an area—namely, safety requirements for the disposal of high-level nuclear waste—that was explicitly within the authority of the NRC. Only after making this activity-based determination did the Court turn to, and accept, California's economic (*i.e.* non-safety) purpose in enacting the law. The *Pacific Gas* Court upheld California's law upon observing that "the

legal reality remains that Congress has left sufficient authority in the states to allow the development of nuclear power to be slowed *or even stopped* for economic reasons." *Id.* at 223 (emphasis added).

Here, Petitioners would have the Court proceed to the uncertain task of attempting to ascertain Virginia's legislative intent (for a statute enacted more than thirty-five years ago and in a State without any official legislative history [4]) before conducting the critical, activity-based inquiry that serves as the threshold in *Pacific Gas*.

Similar to the regulation of electric utilities, conventional mining is an activity that is "characteristically governed by the States." *Id.* at 205. Mining, like the provision of electricity, has "been regulated for many years, and in great detail by the States." *Id.* at 206. Both activities fall within the "historical police powers of the States" and cannot be superseded by the AEA unless that was the "clear and manifest purpose of Congress." *Id.* (quoting *Santa Fe Elevator Corp.*, 331 U.S. at 230).

Thus, there is no need to inquire into the Commonwealth's motives for enacting a moratorium on uranium mining during the 1982 and 1983 legislative sessions because Congress has left to the States the authority to regulate uranium "prior to

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[4] Virginia's Division of Legislative Services ("DLS") observes that "legislative intent is not officially recorded in Virginia." DLS, *Legislative Reference Center*, http://dls.virginia.gov/lrc/leghist.htm (last visited Aug. 29, 2018).

removal from its place of deposit in nature," 42 U.S.C. § 2095 (2018); Pet'rs' App. 111a. The text of the AEA explicitly places the activity regulated by Virginia's statute outside the purview of AEA, and the deference afforded the States in regulating the extraction of uranium from its place in nature has been acknowledged by the regulatory body tasked with implementing the Act. *See In re: Hydro Res., Inc.*, 63 N.R.C. 510, 512-13 (2006) (reading 42 U.S.C. 2092 as "precluding [NRC] jurisdiction over uranium mining.").

The NRC's analysis from *In re: Hydro* is instructive. There, the NRC explained that even "radioactive residue from previous mining activity amounts to 'background radiation' and does not count toward" the dosage limit for setting an NRC permit. *Id.* at 512. The NRC explained: "Conventional mining is controlled by other regulatory authorities. The State of New Mexico, for example, regulates conventional uranium mining within the state. . . . Pursuant to this authority, New Mexico has enforced cleanup orders . . . with respect to its uranium mining activities within the state." *Id.* at 513. Challengers to the NRC-issued permit had argued that high levels of gamma radiation from prior mining activities should be accounted for in setting new federal permit limits. *Id.* at 514. The NRC, however, had no power to broaden the AEA to reach these radiological safety concerns and instead held as follows:

> Were the NRC to expand the definition of TEDE [total effective dose

> equivalent] to include radioactive air emissions from debris left over from unlicensed conventional mining activities, the agency, in effect, would be entering an area of regulation that it has historically considered beyond the scope of the Atomic Energy Act. This we decline to do.

Id. at 515.

Congress, of course, could have mandated that the NRC directly regulate conventional uranium mining on private land, which might have preempted state-specific bans covering that activity. *See, e.g., Hodel v. Va. Surface Min. and Reclamation Ass'n, Inc.*, 452 U.S. 264, 288 (1981) (upholding the Surface Mining Control and Reclamation Act of 1977, Pub. L. No. 95-87, 91 Stat. 447 (codified at 30 U.S.C. § 1201 *et seq.* (2018)), where "the full regulatory burden will be borne by the Federal Government" if a State chooses not to regulate). But the AEA, as enacted, cannot possibly be read to prohibit Virginia's moratorium precisely because there is no federal regulation of conventional uranium mining under the Act.

Accordingly, Petitioners' reading of the Act would obligate the Commonwealth to develop a program for conventional uranium mining in violation of this Court's anti-commandeering decisions. *See, e.g., New York v. United States*, 505 U.S. 144, 166 (1992) ("We have always understood that even where Congress has the authority under the Constitution

to pass laws requiring or prohibiting certain acts, it lacks the power directly to compel the States to require or prohibit those acts."); *Printz v. United States*, 521 U.S. 898, 935 (1997) (finding that a command for state law enforcement officers to administer or enforce a federal regulatory regime is "fundamentally incompatible with our constitutional system of dual sovereignty"); *Murphy v. Nat'l Collegiate Athletic Ass'n*, 138 S.Ct. 1461, 1475 (2018) (the anti-commandeering doctrine "withhold[s] from Congress the power to issue orders directly to the States").

In *New York*, the Court examined a federal law that required States to either "take title" to low-level radioactive waste or to subsidize its transfer. In striking down the law, the Court articulated a notion of federalism-respecting preemption whereby "Congress encourages state regulation rather than compelling it [because] state governments remain responsive to local electorate's preferences [and] state officials remain accountable to the people." *Id.* at 168. When Congress compels states to regulate, on the other hand, "the accountability of both state and federal officials is diminished." *Id.* The Court thus concluded as follows:

> No matter how powerful the federal interest involved, *the Constitution simply does not give Congress the authority to require States to regulate.* The Constitution instead gives Congress the authority to regulate matters directly and to pre-empt

> contrary state regulation. Where a federal interest is sufficiently strong to cause Congress to legislate, it must do so directly; it may not conscript state governments as its agents.

Id. at 178 (emphasis added).

Similarly, while Congress could directly regulate uranium mining, it cannot constitutionally adopt legislation that expressly requires States to develop their own uranium mining regulations. Under Petitioners' theory of the case, however, the Court would interpret the AEA to do just that. If the moratorium were to be preempted, the Commonwealth would be forced to regulate. This interpretation cannot possibly stand as a permissible application of the Court's preemption doctrine. It cannot be that federal courts would interpret the AEA to require state regulation of uranium mining when Congress could not place that command in the text of the statute.

In sum, Congress chose not to regulate "any source material prior to removal from its place of deposit in nature," 42 U.S.C. § 2095 (2018), instead leaving the States' authority over conventional mining undisturbed. Exercising that authority, Virginia imposed a moratorium on uranium mining beginning in 1982, and in the intervening years, communities in Southern Virginia developed other industries that would now conflict with Petitioners' proposed uranium mining project.

II. Concerns about Conventional Uranium Mining *Qua* Mining Support Virginia's Decision to Enact Va. Code § 45.1-283.

From the time of its original enactment in 1982, Virginia's moratorium on uranium mining was premised in substantial part on the adverse impacts that might be anticipated from mining *qua* mining. *See* Act of Apr. 7, 1982, ch. 269, 1982 Va. Acts 269 (codified as amended at VA. CODE ANN. § 45.1-283 (2018)) ("the Virginia Act"). The Virginia Act went on to confirm that "uranium mining shall be deemed to have a significant effect on the surface," with a cross reference to VA. CODE ANN. § 45.1-180(a) (2018), part of the State's mining law dating back at least to 1968.

Amendments to the Virginia Act in 1983 extended the moratorium indefinitely—maintaining the ban "until a program for permitting uranium mining is established by statute." Act of Feb. 24, 1983, ch. 3, 1983 Va. Acts 3; (codified at VA. CODE ANN. § 45.1-283); Pet'rs' App. 178a. The legislative enactment actually included language that dismissed radiological concerns. In pertinent part, the Virginia enactment, as amended in 1983, read as follows:

> The General Assembly finds . . . that a preliminary study, identifying many potential environmental and other effects of uranium development . . . *has not identified any environmental or public health concern that could*

> *preclude uranium development in Virginia.*
>
> The General Assembly further finds, however, that a possibility exists that certain impacts of uranium development activity may reduce or potentially limit certain uses of Virginia['s] environment and resources, and that therefore additional evaluation of the costs and benefits of such activity is necessary before a final decision can be made regarding its acceptability in the Commonwealth.

1983 Va. Acts 3 (emphasis added); Pet'rs' App. 178a.[5]

Notwithstanding radiological concerns raised by citizen stakeholders or even dissenting members of a Uranium Administrative Group ("UAG") consisting

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[5] The quoted language appears in the legislative enactment from 1983, but it is not in the codified text of the Virginia Act, which simply states:

> Notwithstanding any other provision of law, permit applications for uranium mining shall not be accepted by any agency of the Commonwealth prior to July 1, 1984, and until a program for permitting uranium mining is established by statute. For the purpose of construing § 45.1-180 (a), uranium mining shall be deemed to have a significant effect on the surface.

VA. CODE ANN. § 45.1-283 (2018).

of non-legislators—such concerns, as they were understood in the early 1980s, were not dispositive for the General Assembly as a whole in enacting the moratorium. Rather, the 1983 Acts of Assembly included language which suggests that the legislature, based on a preliminary study from that time period, "had not identified any environmental or public health concern" that would justify maintaining a ban on uranium mining. *Id.* According to Chapter 3 of the 1983 Acts of Assembly, the moratorium was needed for an array of factors, including "local concerns." *Id.* Consequently, the General Assembly sought additional cost-benefit studies to determine whether uranium mining would be a net-positive for the Commonwealth's economic development.

The 1983 amendments to the Virginia Act also directed the UAG to submit a report to the Virginia Coal and Energy Commission. *See* Pet'rs' App. 181a-182a. Although this directive included references to mining, milling, and tailings management, those analyses were to be conducted in the context of their relation to the economy as a whole. The concluding passages of the 1983 amendments to the Virginia Act, therefore, focused on the "socioeconomic effects of the uranium development activity at the specific site and its associated regulation on the local community and the Commonwealth," Pet'rs' App. 187a, and a "description of the costs and benefits of allowing the proposed uranium development activity" along with "a description of the person or groups of persons likely to receive the benefit or bear the costs. . . ." Pet'rs' App. 187a-188a. While the

1983 amendments surely mention "radionuclides" in sundry passages, the focus of the legislation was on the cost-benefit analyses, and as stated at the outset of the legislative chapter, "other local concerns." Pet'rs' App. 178a.

In sum, the language from the 1983 legislative enactment fits plainly within the zone of authority left to the States under the AEA and within traditional areas of State regulation that the *Pacific Gas* Court confirmed could justify slowing or even stopping uranium mining for "economic reasons." *Pacific Gas and Elec. Co. v. State Energy Res. Conservation and Dev. Comm'n*, 461 U.S. 190, 222-23 (1983). Indeed, while the Virginia Act is exclusively limited to uranium mining, the *Pacific Gas* Court left to States far greater autonomy to affect the "development of nuclear power" beyond the reach of Virginia's narrowly tailored law. *Id.* As the Court held:

> Congress has left sufficient authority in the States to allow the development of nuclear power to be slowed or even stopped for economic reasons. Given this statutory scheme, it is for Congress to rethink the division of regulatory authority in light of its possible exercise by the states to undercut a federal objective. The courts should not assume the role which our system assigns to Congress.

Id. at 223.

Seeking to extend the meaning of the Virginia Act far beyond its text, Petitioners cite to a series of statements made by legislators, candidates for office, and unelected private citizens, all made approximately three decades after the last legislative action by the General Assembly in 1983. *See* Pet'rs' Br. 19 (citing Pet'rs' App. 239a-97a).[6] Inquiring into the motive of a state legislature is especially problematic. *See, e.g., Shady Grove Orthopedic Assoc.s, P.A. v. Allstate Ins. Co.*, 559 U.S. 393, 404 (2010) (the "approach of determining whether state and federal rules conflict based on the subjective intentions of the state legislature is an enterprise destined to produce 'confusion worse confounded'") (internal citation omitted); *Murphy v. Nat'l Collegiate Athletic Ass'n*, 138 S.Ct. 1461, 1480 (2018) (for preemption the touchstone is whether the law itself "confers rights or imposes restrictions that conflict with the federal law"); *United States v. Woods*, 571 U.S. 31, 47-48 (2013) (noting the inapplicability of statements of intent "written after passage of the legislation" which "therefore d[o] not inform the decisions of the members of Congress who vot[e] in favor of the [law]" and holding that "[p]ost-enactment legislative history (a contradiction in terms) is not a legitimate tool of statutory

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[6] The statements of private citizens with no official role in the Virginia General Assembly cannot possibly be leveraged to infer the intent of the legislature decades after the enactment of a statute.

interpretation.") (citations omitted); *Pacific Gas and Elec. Co.*, 461 U.S. at 216 ("What motivates one legislator to vote for a statute is not necessarily what motivates scores of others to enact it.").

The challenge is exacerbated here, as "legislative intent is not officially recorded in Virginia."[7] For that reason, "[i]t is well-settled [in Virginia courts] that 'we determine the General Assembly's intent from the words contained in the statute.'" *Newberry Station Homeowners Ass'n, Inc. v. Bd. of Supervisors of Fairfax Cty.*, 285 Va. 604, 614, 740 S.E.2d 548, 553 (2013) (internal citation omitted). Where the language of a Virginia statute is straightforward and unambiguous, "resort to legislative history and extrinsic facts is not permitted because we take the words as written to determine their meaning." *Id.* (citation omitted).

The Virginia rule on legislative interpretation is relevant were this Court to consider how the Virginia Act is applied within the Commonwealth. Under the Virginia Act, it is legal for Petitioners to construct a facility to mill uranium ore that has been mined out-of-state and to process that ore into U_3O_8 (*i.e.*, yellowcake) in Virginia. For comparison's sake, the Cameco Corporation is one of the world's largest uranium companies. Ore slurry from Cameco's McArthur River mine has historically been transported "in special containers 80 kms [kilometers] southwest to Key Lake where it's milled and blended for processing with low-grade ore

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[7] *See* DLS *supra*, note 4.

stockpiled at the mill."[8] Similarly, the ore slurry from Cameco's Cigar Lake deposit "is trucked in special containers to . . . [the] McClean Lake mill 70 kms [kilometers] northeast."[9] The feasibility of transporting ore would likely depend on the market price for a mill's finished product, which in recent decades has swung from below $20 per pound of yellowcake to over $160 per pound when adjusted for inflation.[10] Any application of Virginia's statute within the Commonwealth, however, would not fluctuate with the price of uranium.

Finally, to the extent this Court would look to legislative motive at all, it undeniably would be the motive of the legislature that enacted the Virginia Act, not one of several legislatures that failed to take any action between 2009 and 2014. Not only are statements made between 2009 and 2014 irrelevant for inferring the intent of the General Assembly in 1983, they are also impossible to ascribe to a single legislature given that the House of Delegates reorganized three times during that timeframe, the Virginia Senate reorganized twice, and two Governors served as chief executive of the

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[8] Cameco Corp., *Businesses*, https://www.cameconorth.com/about/businesses (last visited Aug. 20, 2018).

[9] *Id.*

[10] *See* NATIONAL RESEARCH COUNCIL, URANIUM MINING IN VIRGINIA: SCIENTIFIC, TECHNICAL, ENVIRONMENTAL, HUMAN HEALTH AND SAFETY, AND REGULATORY ASPECTS OF URANIUM MINING AND PROCESSING IN VIRGINIA, 93 (2012), https://doi.org/10.17226/13266.

Commonwealth.[11] *See Abbott v. Perez*, 138 S.Ct. 2305, 2325 (confirming that when challenging legislative districts that were finally adopted in 2013, "there can be no doubt about what matters: It is the intent of the 2013 Legislature" and not the intent of the 2011 legislature that adopted "defunct and never-used plans"); *see also Hunter v. Underwood*, 471 U.S. 222, 233 (1985) (reviewing the constitutionality of a 1901 Alabama law based on the motivation of the legislature at the time of "its original enactment" and declining to consider whether the law "would be valid if enacted today").

III. Uranium Mining Is Inconsistent with the Vision for Economic Development that Southern Virginia Has Pursued Over Many Decades.

The Commonwealth, working with local governments represented by *amici*, long ago chose an economic path for Southern Virginia that includes building a stable economy focused on agriculture, tourism, motorsports, education, and other complimentary industries. This path does not include a large uranium mine.[12]

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[11] Members of the Virginia House of Delegates are elected to two-year terms in odd-numbered years, after which the House reorganizes, electing a Speaker and making Committee assignments. Members of the Virginia Senate are elected to four-year terms in odd-numbered years, with the Senate reorganizing following each general election in which Senators are elected.

[12] As one local civic leader recently observed, "I see a beautiful river, and I can see shops and technology companies. All of those things fit together. I don't see a mine." Robert

Even the modern, *non*-legislative history cited by Petitioners (which, as stated in Part II, *supra*, is irrelevant to the preemption analysis), evinces a host of motives for not amending the Virginia Act, including state economic development motives. Thus, Delegate Glenn R. Davis (R-Virginia Beach), reportedly expressed a preference for offshore drilling for natural gas, along with wind and solar power, as "technologies [that] hold much more promise for domestic energy production and Virginia Beach job creation than uranium mining does." Pet'rs' App. 244a. Delegate Manoli Loupassi (R-Richmond) articulated the economic concerns in greater detail:

> The anticipated economic benefits of the proposed mining operation are speculative. The operation of uranium mining is price-dependent. When prices are high, mines flourish. When prices drop, uranium mines close and uranium miners lose their jobs. ... The 'Boom to Bust to Boom to Bust' cycle is well-documented in the uranium mining industry, and has shown amazing consistency over the past 25 years.

Pet'rs' App. 264a-66a.

Powell, *Solon of Southern Virginia: Civil leader raises concerns about uranium mining in his home county*, VIRGINIA BUSINESS MAGAZINE, (June 28, 2012), http://www.virginiabusiness.com/news/article/solon-of-southern-virginia.

A National Academy of Sciences study on uranium mining in Virginia ("NAS Report") confirms many justifications for building a diverse and stable economy in Southern Virginia without uranium mining.[13] The NAS Report, for example, identifies various adverse impacts for surface water and groundwater quantity and quality from the state-regulated mining activities and wholly distinct from any federally regulated processing of uranium ore that might occur after mining.[14]

Critical to the business interests of Southern Virginia, the NAS Report also documents the boom-and-bust nature of the uranium mining industry, making it especially unwelcome for communities looking to stabilize their economies. The NAS Report notes that uranium prices spiked in the 1970s, but shortly thereafter suffered a steep and sustained decline: "there were depressed uranium prices for the 1980s and 1990s with spot prices well below the cost of production for most uranium mines."[15] In fact, the NAS Report shows that from 1989 through 2004, the spot price of uranium remained at or below $20 per pound when adjusted a

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[13] *See* NATIONAL RESEARCH COUNCIL, *supra* note 10.

[14] *See id.* at 181-87, 193-97, 199.

[15] *See id.* at 92.

for inflation[16] Today, publicly available data show that prices for uranium remain near $25.[17]

These figures are sobering to local economic development leaders, given that Petitioners' public filings with Canadian securities administrators show that development of the Coles Hill Deposit would not be economically viable at such low prices. Petitioners' recent securities filing claims that the Coles Hill Deposit "has the potential for attractive economics based on an assumed U_3O_8 price of $64 per lb," requiring a dramatic increase in uranium prices before mining could even begin in Southern Virginia.[18] The volatility of the project as a whole is confirmed by the disclosure that a "change in the prices of uranium of $5.00 per lb results in a potential change in the project NPV [net present value] of $110.0 million."[19] Even more disconcerting

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[16] *See id.* at 93.

[17] *See* Ux Consulting Company, LLC, *UxC Nuclear Fuel Price Indicators*, https://www.uxc.com/p/prices/UxCPrices.aspx (last visited Aug. 29, 2018) (showing a weekly spot price of $26.10 as of August 20, 2018, and a month-end price of $25.70 as of July 30, 2018).

[18] Virginia Energy Resources, Inc., *Management Discussion and Analysis: 1st Quarter Ended March 31, 2018*, 4 (downloadable through the System for Electronic Document Analysis and Retrieval (SEDAR), which "is a filing system developed for the Canadian Securities Administrators," and published online at https://www.sedar.com/homepage_en.htm).

[19] *Id.*

for *amici* is the disclosure that the project might not be economically feasible to mine at all: "overly onerous regulations might dramatically increase the estimates for capital expenditures and operating costs for the Coles Hill project to the point where the required return on capital is insufficient to support the advancement of the project to commercial production."[20]

In short, *amici* continue to maintain non-safety justifications for leaving the Commonwealth's moratorium undisturbed. These justifications serve legitimate State interests, none of which are preempted by the AEA.

IV. The Doctrine of Laches Should Protect Local Communities That Have Relied on Petitioners' Prior Acceptance of the Virginia Act.

Virginia's uranium mining ban was first enacted in 1982 and amended in 1983. In the intervening thirty-five years, the Southern Virginia region has developed a diverse economy. Petitioners are only now raising their preemption claim, long after significant, non-uranium investments in the region have been made. Astoundingly, Petitioners filed this challenge after pledging to local communities that they would leave the moratorium undisturbed pending resolution of the NAS Report. *See* Part III, *supra*. In the *Danville Register & Bee* and elsewhere, Petitioner Virginia Uranium, Inc. affirmed:

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[20] *Id.* at 13.

> We are prepared to work with members of the General Assembly in 2012 to lift the moratorium on uranium mining if, and only if, the NAS concludes that this can be done with the highest regard for the well-being of people, livestock and the environment. . . . On the other hand, if the NAS finds that uranium mining would entail unacceptable risks, we will not pursue lifting the moratorium in 2012. Period.[21]

In similar language published in the Norfolk-based *Virginian-Pilot*, Petitioners further asserted their acquiescence to the role of the Virginia General Assembly:

> We are committed to heeding the findings of the study when they are released, regardless of the outcome. If, and only if, the NAS concludes that properly regulated uranium mining can be done safely, we intend to pursue lifting the moratorium in the General Assembly. . . . On the other hand, if the NAS finds that uranium mining cannot

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[21] Walter Coles, *No End-Run Around the Study*, DANVILLE REGISTER & BEE, Mar. 28, 2011, A8 (reproduced in the Appendix to this brief).

> be done safely, we will obviously not pursue lifting the moratorium.[22]

Domestic travel and tourism in Halifax County, Pittsylvania County, and the City of Danville alone supported 2,100 jobs and more than $41.6 million in payroll for 2016, the most recent year for which data are available. Tourism in these communities further generated more than $206 million in total expenditures as calculated by the Virginia Tourism Corporation, including more than $14 million in state and local tax receipts.[23]

According to an analysis by the Weldon Cooper Center for Public Service at the University of Virginia, Pittsylvania County benefited from more than $340 million in direct economic impacts from agriculture-related industries in 2015, with total economic impacts from agriculture topping out at $412.9 million. [24] In fact, agriculture-related

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[22] Walter Coles, *Uranium Company Renews Pledge to Protect Virginians*, VIRGINIAN-PILOT, Mar. 27, 2011, 8 (Hampton Roads section) (reproduced in the Appendix to this brief).

[23] *See* Virginia Tourism Authority, *The Economic Impact of Domestic Travel on Virginia Counties 2016*, at 27-28 (2017), https://www.vatc.org/wp-content/uploads/2017/09/2016_Economic_Impact_of_Domestic_Travel_on_Virginia_and_Localities.pdf.

[24] *See* TERANCE J. REPHANN, WELDON COOPER CENTER FOR PUBLIC SERVICE AT THE UNIVERSITY OF VIRGINIA, THE ECONOMIC IMPACT OF VIRGINIA'S AGRICULTURE AND FOREST INDUSTRIES 54 (2017), http://www.vdacs.virginia.gov/pdf/weldoncooper2017.pdf.

industries provide the Counties that are home to, and immediately adjacent to, the Coles Hill Deposit (Pittsylvania, Henry, Halifax, Franklin, Bedford, and Campbell counties) a total of $3.2 *billion* in economic benefits annually.[25]

Private boarding school education is also a significant part of the Southern Virginia economy. Hargrave Military Academy and Chatham Hall are nationally prominent, private boarding schools located in Chatham, Virginia. Chatham Hall was founded in 1894 and draws students from an international pool of applicants. Hargrave Military Academy, founded in 1909, is an exceptional private military boarding school that also prides itself on its international reputation and influence. Both schools sit less than ten miles, by car, from the Coles Hill Deposit.

All of this economic development occurred while Petitioner, Virginia Uranium, Inc., and its predecessor companies accepted the Commonwealth's mining ban as a duly enacted law. Virginia Uranium, Inc., was founded in January of 2007, but according to Petitioner it was preceded by a "predecessor company," Marline. [26] Marline

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[25] *See id.* When the benefits from forestry-related industries are included, the total economic benefit exceeds $5.3 billion. *Id.*

[26] *See* Virginia Uranium, Inc., *History of VUI and Coles Hill*, http://www.virginiauranium.com/who-we-are/history-of-coles-hill/ (last visited August 1, 2018) ("On January 16, 2007 Virginia Uranium was formed, with Walter Coles as chairman .

investigated the Coles Hill Deposit in 1982, the very same year that the Virginia General Assembly enacted the Virginia Act.[27]

Petitioners failed to raise any concerns regarding federal preemption of the Virginia Act for more than thirty years, while *amici* and the Commonwealth worked to build the economy of Southern Virginia without uranium mining. "The principle that the passage of time can preclude relief has deep roots in our law. . . . It is well established that laches, a doctrine focused on one side's inaction and the other's legitimate reliance, may bar long-dormant claims for equitable relief." *City of Sherrill, N.Y. v. Oneida Indian Nation of New York*, 544 U.S. 197, 217 (2005). *See SCA Hygiene Products Aktiebolag v. First Quality Baby Products, LLC*, 137 S.Ct. 954, 960 (2017) ("Laches is 'a defense developed by courts of equity' to protect defendants against 'unreasonable, prejudicial delay in commencing suit.'") (quoting *Petrella v. Metro-Goldwyn-Mayer, Inc.*, 134 S.Ct. 1962, 1973 (2014)); *see also Cheney v. U.S. Dist. Court for D.C.*, 542 U.S. 367, 379 (2004) ("Laches might bar a petition for a writ of mandamus if the petitioner 'slept upon his rights . . . and especially if the delay has been prejudicial to the [other party], or

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. . Norman Reynolds, who had been president of *the predecessor company, Marline*, brought his valuable experience to the table as a Director and as President and Chief Executive Officer.") (emphasis added).

[27] *See* Katherine E. Slaughter, *Will Uranium Get a Glowing Welcome in Virginia?*, 28 VA. ENVTL. L. J. 483, 487 (2010).

to the rights of other persons.'") (quoting *Chapman v. Cty. of Douglas*, 107 U.S. 348, 355 (1883)) (alterations in original). Hence, the doctrine of laches should bar Petitioners from seeking the declaratory and injunctive relief they have requested here.

CONCLUSION

The Virginia General Assembly's legislative enactment in 1983 represents a legitimate exercise of the State's historic police powers. The judgment of the Court of Appeals should be affirmed.

Respectfully submitted,

Cale Jaffe
Counsel of Record
Director, Environmental and Regulatory Law Clinic
University of Virginia School of Law
580 Massie Road
Charlottesville, VA 22903
(434) 924-4776
cjaffe@law.virginia.edu

Anthony F. Troy
Patrick Callahan
Eckert Seamans Cherin & Mellott, LLC
919 E Main St., Suite 1300
Richmond, VA 23219
(804) 788-7740

Counsel for Amici Curiae Members of the Southern Virginia Delegation to the Virginia General Assembly, Local Chambers of Commerce, Civic, Trade, and Economic Development Associations, and Municipalities

Appendix

APPENDIX

I. LIST OF *AMICI CURIAE*

**MEMBERS OF
THE SOUTHERN VIRGINIA DELEGATION TO
THE VIRGINIA GENERAL ASSEMBLY,
LOCAL CHAMBERS OF COMMERCE,
CIVIC, TRADE, AND ECONOMIC
DEVELOPMENT ASSOCIATIONS,
AND MUNICIPALITIES**

Members of the Southern Virginia Delegation to the Virginia General Assembly:

State Senator William M. Stanley, Jr.

Senator Frank M. Ruff, Jr.

Delegate Leslie R. "Les" Adams

Delegate James E. Edmunds, II

Delegate Daniel W. Marshall, III

Delegate Thomas C. Wright, Jr.

Municipalities:

Halifax County, Virginia Board of Supervisors

Town Council of Halifax, Virginia

Town Council of South Boston, Virginia

Town of Clarksville, Virginia

Chambers of Commerce:

Danville-Pittsylvania County Chamber of Commerce

Halifax County, Virginia Chamber of Commerce

Clarksville, Virginia Lake Country Chamber of Commerce

Civic, Trade, and Economic Development Associations

Halifax County, Virginia Farm Bureau

Halifax County Department of Tourism

River District Association (Danville, Virginia)

Economic Development Authority for the Town of Clarksville, Virginia

The Alliance for Progress in Southern Virginia

The Virginia Coalition

Danville Industrial Development, Incorporated

Danville Area Development Foundation

Industrial Development Authority of Halifax County, Virginia

Industrial Development Authority of South Boston, Virginia

II. *Description of Amici*

The Southern Virginia delegation to the Virginia General Assembly includes six State Senators and Delegates whose districts comprise the Coles Hill Deposit in Pittsylvania County and many of the surrounding communities in the region. The delegation includes State Senator William M. Stanley, Jr., a Republican representing the 20th Senatorial District; Senator Frank M. Ruff, Jr., a Republican representing the 15th Senatorial District; Delegate Leslie R. "Les" Adams, a Republican representing the 16th House District; Delegate James E. Edmunds, II, a Republican representing the 60th House District; Delegate Daniel W. Marshall, III, a Republican representing the 14th House District; and Delegate Thomas C. Wright, Jr., a Republican representing the 61st House District. The legislative districts for Senator Stanley and Delegate Adams encompass the entirety of the Coles Hill Deposit.

The Chambers of Commerce for Halifax County, Pittsylvania County, the City of Danville, and the town of Clarksville, along with the Industrial Development Authority for Halifax County, the Industrial Development Authority of South Boston, Virginia, and the Economic Development Authority for the Town of Clarksville, collectively represent hundreds of businesses, from sole proprietors to companies with over 350 employees. These organizations have worked together for decades to improve business opportunities in the region and to promote a vibrant, profitable, business community for Southern Virginia. The Chambers and related associations also collaborate with the Halifax County, Virginia Farm Bureau, which works on

behalf of the area's farmers to promote agriculture and agriculture-dependent businesses.

The Danville Industrial Development Authority, Inc., organized in 1947, is primarily engaged in promoting and supporting industrial development in the City of Danville, Virginia and Pittsylvania County, Virginia. It often coordinates its efforts with the Danville Area Development Foundation, Inc., organized in 1958, which is primarily engaged in assisting and promoting the industrial and commercial development of the City of Danville, Virginia and the immediate surrounding area. They are joined by the River District Association, which was formed in 1999 to coordinate efforts to revitalize the downtown Danville community. In addition, the Alliance for Progress in Southern Virginia, based in Danville, and the Virginia Coalition, based in Halifax County, have coordinated with business leaders opposed to uranium mining in Southern Virginia.

The municipal government *amici* include the Board of Supervisors of Halifax County, Virginia and the towns of South Boston, Halifax, and Clarksville. Collectively, they are home to more than 35,000 residents. The scenic rivers and nearby Buggs Island Lake are popular destinations for camping, fishing, hunting, boating, swimming, and water skiing. Halifax County is also home to the Virginia International Raceway ("VIR"), a nationally recognized motorsports destination and venue. VIR has been ranked by Road & Track Magazine as one of the top ten "North American race tracks you need

to visit." The Halifax County Department of Tourism is a joint governmental partnership with Halifax County, Virginia, the Town of South Boston and the Town of Halifax. It serves as the official marketing organization for these municipalities, working to promote agritourism, motorsports, arts and culture, and the natural scenic beauty of Southern Virginia.

III. Walter Coles, *Uranium Company Renews Pledge to Protect Virginians*, VIRGINIAN-PILOT, Mar. 27, 2011, at 8 (Hampton Roads section).

Your editorial mischaracterizes our company's position on the National Academy of Sciences study of uranium mining in Pittsylvania County, as well as the General Assembly's deliberations on whether to lift Virginia's moratorium on uranium mining.

Our company has unequivocally said that the well-being of Virginia's residents and the sustainability of our environment are our foremost concerns.

To ensure the protection of public health and the environment, we have consistently supported the independent study being conducted by the National Academy of Sciences (NAS). We have provided all of the resources, data and expertise at our disposal to ensure the NAS has everything it needs to leave no stone unturned.

We are committed to heeding the findings of the study when they are released, regardless of the outcome. If, and only if, the NAS concludes that properly regulated uranium mining can be done

safely, we intend to pursue lifting the moratorium in the General Assembly. This does not undermine the study, precisely because our efforts are contingent upon just one possible outcome of the study.

On the other hand, if the NAS finds that uranium mining cannot be done safely, we will obviously not pursue lifting the moratorium.

For those concerned about rushing a vote in the General Assembly, keep in mind that 2012 will mark the end of a long and orderly process conducted by the state over the last three years that has involved numerous studies and public hearings. Furthermore, lifting the moratorium would be only the first step in a lengthy process. Developing state regulations and obtaining the necessary permits will take years and allow ample opportunities for public comment, technical and scientific review and scrutiny by all stakeholders.

The editorial failed to point out that it has been the strident opponents of uranium mining who have consistently undermined the NAS study, not Virginia Uranium.

In an April 2009 letter to the Richmond Times-Dispatch, representatives of the three leading opponents of uranium mining Virginia – the Southern Environmental Law Center, the Piedmont Environmental Council and the Virginia League of Conservation Voters – made their position clear when they said they "did not want the study in the first place."

The bottom line is that our company will not push to lift the moratorium if the NAS determines that it would pose unacceptable risks. We hope

opponents of uranium mining will adopt the same reasonable approach if the NAS finds that mining can be done safely.

We should all have full faith and confidence in the Academy to deliver an independent, scientifically based assessment, and we should all fully commit to abide by its findings.

Walt Coles, Sr.
Chairman of the Board
Virginia Uranium Inc.
Chatham

IV. Walter Coles, *No End-Run Around the Study*, DANVILLE REGISTER & BEE, Mar. 28, 2011, at A8.

Because of irresponsible commentary in some area publications, I would like to reaffirm our company's position on the National Academy of Sciences' study of uranium mining in Virginia and the General Assembly's deliberations on whether to lift Virginia's moratorium on uranium mining.

Since the formation of Virginia Uranium Inc. in 2007, we have consistently said that the well-being of Virginia's residents and the sustainability of our environment are our foremost concerns. We all breathe the same air, drink the same water and enjoy the same majestic beauty of Virginia's environment. We will not undertake any actions that would in any way threaten these sacred treasures.

To ensure the protection of public health and the environment, we have consistently agreed with the

need for an independent, scientific study of the potential impacts of uranium mining in Virginia.

Since the Virginia Coal and Energy Commission tasked the National Academy of Sciences to conduct such a study in 2009, we have unequivocally supported the efforts of the NAS. We have provided all of the resources, data and expertise at our disposal to ensure that the NAS has everything it needs to leave no stone unturned.

The NAS will release the findings of its study in December. We are fully committed to heeding those findings – regardless of the outcome. Our position on this has remained unchanged since the inception of the study. We are committed to this process and dedicated to following the conclusions of the study.

We sincerely hope the NAS will find that properly regulated uranium mining and milling can be conducted safely in Virginia. We do not believe there is anything irresponsible or inappropriate about making preparations for this possibility.

We are prepared to work with members of the General Assembly in 2012 to lift the moratorium on uranium mining if, and only if, the NAS concludes that this can be done with the highest regard for the well-being of people, livestock and the environment. This does not in any way undermine the NAS study, precisely because our plans are contingent upon just one possible outcome of the NAS study.

For those who may be concerned that lifting the moratorium would be a rush to mining uranium, we assure you that, in fact, it would only be the first step in a very lengthy process that will take years before a single shovel enters the ground. Developing

state regulations and obtaining the necessary permits will take years and allow ample opportunities for public comment, technical and scientific review and careful scrutiny by all stakeholders.

On the other hand, if the NAS finds that uranium mining would entail unacceptable risks, we will not pursue lifting the moratorium in 2012. Period.

Ironically, it has been the opponents of uranium mining who have consistently and vociferously undermined the NAS study, not Virginia Uranium. Mining opponents have characterized the NAS as corrupt, pro-nuclear and inadequate to the task of the study and have even lambasted the study itself as a waste of money and a rigged, foregone conclusion.

In an April 2009 letter to the Richmond Times-Dispatch, representatives of the three leading opponents of uranium mining in Virginia – the Southern Environmental Law Center, the Piedmont Environmental Council and the Virginia League of Conservation Voters – went so far as to say that they "did not want the study in the first place." Commonsense would suggest that these powerful, influential groups be held to account for their outright disregard for the NAS and its scientific-based study.

The bottom line is that neither our company nor the General Assembly will push to lift the moratorium if the NAS determines that uranium mining and milling cannot be done safely. We hope opponents of uranium mining will adopt the same reasonable approach if the NAS finds that mining can be done safely. We should all have full faith and

confidence in the Academy to deliver an independent, scientifically based assessment, and we all should fully commit to abiding by its findings.

Coles, a resident of Chatham, is chairman of Virginia Uranium, Inc.

No. 16-1275

In the
Supreme Court of the United States

VIRGINIA URANIUM, INC., ET AL.,
Petitioners,

v.

JOHN WARREN, ET AL.,
Respondents.

ON PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT

BRIEF OF NATIONAL CONFERENCE OF STATE LEGISLATORS, NATIONAL LEAGUE OF CITIES, AND INTERNATIONAL CITY/COUNTY MANAGEMENT ASSOCIATION AS *AMICI CURIAE* IN SUPPORT OF RESPONDENTS

Lisa Soronen
STATE AND LOCAL LEGAL CENTER
123 N. Capitol St. N.W.
Washington, DC 20001
(202) 434-4845

John J. Korzen
Counsel of Record
WAKE FOREST UNIVERSITY SCHOOL OF LAW APPELLATE ADVOCACY CLINIC
Post Office Box 7206
Winston-Salem, NC 27109
(336) 758-5832
korzenjj@wfu.edu

GibsonMoore Appellate Services, LLC
206 East Cary Street • Richmond, VA 23219
804-249-7770 • www.gibsonmoore.net

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INTEREST OF AMICI CURIAE[1]

The National Conference of State Legislatures (NCSL) is a bipartisan organization that serves the legislators and staffs of the Nation's 50 States, its Commonwealths, and Territories. NCSL provides research, technical assistance, and opportunities for policymakers to exchange ideas on the most pressing state issues. NCSL advocates for the interests of state governments before Congress and federal agencies and regularly submits amicus briefs to this Court in cases, like this one, that raise issues of vital state concern.

The National League of Cities (NLC) is dedicated to helping city leaders build better communities. NLC is a resource and advocate for 19,000 cities, towns, and villages, representing more than 218 million Americans.

The International City/County Management Association (ICMA) is a non-profit professional and educational organization consisting of more than 11,000 appointed chief executives and assistants serving cities, counties, towns, and regional entities. ICMA's mission is to create excellence in local governance by advocating and developing the professional management of local governments throughout the world.

SUMMARY OF THE ARGUMENT

Petitioners seek to compel a state to allow uranium minimum on nonfederal land based on

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[1] This brief was prepared by counsel for amici and not by counsel for any party. No outside contributions were made to the preparation or submission of this brief. Both parties have given written consent to the filing of this brief.

federal preemption, even though the federal act in question is silent as to uranium mining on nonfederal land, mining is historically subject to state police power, and a statute in the state in question bans uranium mining. Such extraordinary relief would not be subject to a limiting principle. The Court should affirm the dismissal of such an unwonted claim.

Petitioners' implied preemption argument is also extraordinary, because it depends on divining the subjective intent of a state legislature rather than relying on the plain text of the state's legislation. Respondents persuasively contend that peering behind statutory text in search of some unexpressed actual motive is a fruitless endeavor.

For one thing, if legislative motive is a factual inquiry, then depositions and other discovery of sitting legislators might follow. Discovery of legislators and legislative staffers would be highly intrusive and also run afoul of the states' analogs to the federal Speech or Debate Clause, which are found in more than forty states. Determinations of the subjective intent behind legislation are also unreliable due to the mix of motives animating legislation and the passage of time.

Furthermore, states lack the resources to produce the types of legislative history available to courts construing federal statutes. The available legislative history documentation therefore varies greatly from state to state, making consistent preemption analysis based on legislative history impossible.

Finally, there is no workable rule for determining the subjective intent of state legislators. Allowing Petitioners' preemption claim to proceed would raise many unanswerable questions about when federal-

state conflicts can be resolved based on matters outside the statutory text.

ARGUMENT

Amici agree fully with the contentions in the Brief for Respondents. Amici write separately to oppose the extraordinary relief sought by Petitioners and to address further the problems inherent in determining a state legislature's subjective intent. *See* Resp. Br. at 38-43.

I. Petitioners seek extraordinary relief that is not subject to any limiting principle.

Petitioners seek extraordinary relief—a federal court injunction compelling a state sovereign, the Commonwealth of Virginia, to grant uranium mining permits on nonfederal land. They seek this relief even though the federal act in question never mentions uranium mining on nonfederal land, a Virginia statute does not permit uranium mining, and "the regulation of mining has long been recognized as a legitimate exercise of a state's police powers." *Simpson v. Commonwealth of Kentucky*, No. 88-5065 (L), 1989 WL 20625 (6th Cir. Feb. 28, 1989) (citing *Booth v. Indiana*, 237 U.S. 391, 396 (1915); *Wilmington Star Mining Co. v. Fulton*, 205 U.S. 60, 73 (1907) ("The use and enjoyment of mining property being subject to the reasonable exercise of the police power of the state. . . .")).

Amici fear the lack of any limiting principle on such relief. For example, imagine a three-step process, with the steps in chronological order dubbed A, B, and C. Might federal courts enjoin a state to require step A even though the state bans step A, step A has historically been subject to the state's police

power, and the federal act in question only regulates steps B and C? That is the relief Petitioners seek here.

Or imagine a federal Paper Production Act, the purpose of which includes encouraging the production of paper, overseen by a Federal Paper Agency (FPA). The Act is silent as to the clear cutting of trees on nonfederal land while allowing the clear cutting of trees on federal land. The Act and the FPA regulate safe practices only for the milling of trees into paper and the safe handling of pulp waste. A state does not allow clear cutting of trees. After the price of paper goes up, landowners seek an injunction requiring the state to allow them to clear cut trees on nonfederal land. Can a federal court so enjoin the state?

The dissent below would seemingly say "Yes, bring on the chainsaws." *See* Pet. 47a-48a (stating that the Act's purpose is to unleash "the power of the private sector" to develop nuclear energy). Amici contend that "No," federal silence as to step A while regulating only steps B and C does not preempt a state's ability to regulate step A, particularly where regulating step A has historically been a legitimate exercise of state police power. To force states to allow some preliminary step, in a process for which Congress has regulated only later steps, is wrong because "it frustrates rather than effectuates legislative intent simplistically to assume that *whatever* furthers the statute's primary objective must be the law." *Rodriguez v. United States*, 480 U.S. 522, 526 (1987) (per curiam).

Again, how the rule sought by Petitioners might be limited is unclear. What if a federal act regulates only step C and neither step A nor step B, which have both historically been subject to state police power?

Might a federal court enjoin a state that prohibits steps A and B so as to require the state to permit both of them? Truly Petitioners' claim would lead to such slippery slopes. A ruling for Petitioners would inject mischief and uncertainty into preemption analysis. Amici ask the Court for this reason to affirm the lower court.

II. Preemption analysis should not turn on the subjective intentions of state legislators.

Petitioners also make an extraordinary implied preemption argument. They would require courts to look past the plain language of decades-old state statutes and attempt to divine a single "true purpose" of state legislators at the time of enactment. They argue that Virginia's ban on uranium mining should be preempted because Virginia *intended also* to ban uranium millings and tailings storage. But the Virginia legislature did not actually ban uranium milling or tailings storage; it only banned mining. Who knows what the Virginia legislature intended in the early 1980s when it passed the ban? It should not even matter when the federal statute only addresses uranium milling or tailings storage.

Preemption should not be based on an exploration for the subjective intent of state legislators, for numerous reasons, including that: (1) discovery of state legislators' subjective intentions would be intrusive and inconclusive; (2) the availability of state legislative history varies widely from state to state; and (3) there is no workable rule for determining the subjective intent of state legislators.

1. If determining the purpose of a challenged state law involves an issue of historical fact, as Petitioners and the Federal Government assume, *see*

Resp. Br. at 34, then plaintiffs may seek to discover the purposes of state legislators in enacting legislation, including by depositions, interrogatories, and more. Such discovery would be improper, however, because it is "not consonant with our scheme of government for a court to inquire into the motives of legislators." *Tenney v. Brandhove*, 341 U.S. 367, 377 (1951). The Speech or Debate Clause of the United States Constitution explicitly protects Senators and Representatives from legal inquiries based on their speech during sessions of their respective houses. U.S. Const. art. I, § 6, cl. 1 ("for any speech or debate in either House, they shall not be questioned in any other place").

The Constitution included the Speech or Debate Clause because "[i]n order to enable and encourage a representative of the public to discharge his public trust with firmness and success, it is indispensably necessary, that he should enjoy the fullest liberty of speech, and that he should be protected from the resentment of every one." *Tenney*, 341 U.S. at 373 (quoting II Works of Jams Wilson 38 (Andrews ed. 1896)). The clause means that "[l]egislators are immune from deterrents to the uninhibited discharge of their legislative duty, not for their private indulgence but for the public good." *Tenney*, 341 U.S. at 377.

The Constitution of Virginia contains a similar provision that grants immunity to legislators "for any speech or debate in either house." Va. Const. art. IV, § 9. The clause also exempts members of the Virginia General Assembly from being subject to civil process during sessions. *Id.* The Eastern District of Virginia has held that the Virginia Speech or Debate Clause and the United States Constitution's Speech or

Debate Clause prohibit a plaintiff from subpoenaing and deposing a Virginia state legislator to inquire into his legislative activity or his motives for the activity. *Greenburg v. Collier*, 482 F. Supp. 200, 204 (E.D. Va. 1979).

Forty-three other state constitutions contain a section similar to the Speech or Debate Clause. Steven F. Huefner, *The Neglected Value of the Legislative Privilege in State Legislatures*, 45 Wm. & Mary L. Rev. 221, 224 (2003). This protection is critical because "society's increasing propensity to litigate and contemporary distrust of government almost guarantee that disaffected individuals—and even some political opportunists—will seek creative ways to gain relief through, extract information from, or merely harass or burden, elected state representatives." *Id.* at 226-27. Thus, discovery of state legislators' subjective intent might not even be allowed.

Discovery of state legislators' subjective intent, if even allowed, would put a burden on legislative resources, including the time of legislators and their staffers. And to what end would such fact discovery lead? Legislators should not be expected to recollect their intentions years after the fact. According to the "forgetting curve," people are typically unable to retrieve roughly 50% of information one hour after receiving it. Joyce W. Lacy & Craig E. L. Stark, *The Neuroscience of Memory: Implications for the Courtroom*, Nat'l Inst. Health, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4183265/pdf/nihms-624859.pdf (last visited Aug. 28, 2018). Memory is especially malleable, and legislators' might understandably recall motivations that did not exist at the time or forget ones that did. *See id.*

Eyewitness testimony is considered most reliable when recorded immediately after an event, certainly not thirty-five years later. *Id.*

2. Moreover, states do not have the resources of the Federal Government and its ability to create extensive legislative history. The resources for creating and the availability of different types of legislative history varies significantly from state to state. *See* Bart M. Davis, Kate Kelly, & Kristin Ford, *Use of Legislative History: Willow Witching for Legislative Intent*, 43 Idaho L. Rev. 585, 586 (2007). Searching for legislative intent can be a "perilous quest" due to "the nature of the legislative process and the unreliability of the records as consensus documents." *Id.* at 600. For the intent of Congress, courts at least have the reliable recordation of Congressional debates on the floor and in committees. Richard A. Danner, *Justice Jackson's Lament: Historical and Comparative Perspectives on the Availability of Legislative History*, 13 Duke J. Comp. & Int'l L. 151, 165-70 (2003). At the state level, however, there is no guarantee of finding legislative history as extensive as the Congressional records.

Some states are able to create significantly more or less legislative history than others. Rhode Island, for example, has no floor or committee debate records available. *Id.* The only legislative history in Missouri is official copies of bills, without support documentation of legislative comments or debate. Missouri Legislative History: Legislative History, U. Mo. Sch. L., http://libraryguides.missouri.edu/c.php?g=28632&p=175352 (last visited Aug. 27, 2018). Idaho does not make drafting records of bills available to the public and does not record legislative floor debate. Davis, supra, at 586. It does make

available committee minutes and attachments and some statements of legislative intent from state House and Senate Reports. *Id.* Colorado researchers can find procedural history, audio records of legislative hearings and floor debates, summaries of committee meetings, and different versions of the bill. Peggy Lewis & Matt Dawkins, *Researching Legislative History*, 44 Colo. L. 33 (2015). North Carolina provides the chronological bill history, committee minutes, and possibly floor debate audio records for some laws. North Carolina General Assembly Legislative Library, *North Carolina Legislative History Step by Step*.

On the other hand, Texas provides audio and video of legislative floor debates, bill files with committee reports and analyses, house and senate journals, statements of legislative intent, committee meeting minutes, and session summaries. Davis, *supra*, at 586; Legislative Reference Library of Texas: Typical Materials, https://lrl.texas.gov/legis/legintent/typicalMaterials.cfm#minutes (last visited Aug. 27, 2018).

Virginia has little legislative history. Virginia does not officially record legislative intent through any means. Legislative Reference Center: Legislative History, Va. Division Legis. Servs., http://dls.virginia.gov/lrc/leghist.htm (last visited Aug. 27, 2018). The only tools to search for legislative intent are drafts of bills, fiscal impact statements, and video archives of floor sessions. *Id.* Transcripts are not provided for the videos. *Id.*

The varying availability of legislative history materials at the state level confirms this Court's statement that "determining whether state and

federal rules conflict based on the subjective intentions of the state legislature is an enterprise destined to produce 'confusion worse confounded,'" *Shady Grove Orthopedic Assocs., P.A. v. Allstate Ins. Co.*, 559 U.S. 393, 404 (2010) (quoting *Sibbach v. Wilson & Co.*, 312 U.S. 1, 14 (1941)). The same law might survive preemption in one state and be preempted in another simply due to the differences in available legislative history materials. *Id.* Because laws are often passed for multiple purposes, determining the different purposes "may be impossible to discern." *Id.* Federal judges asked to preempt state law "would be condemned to poring through state legislative history—which may be less easily obtained, less thorough, and less familiar than its federal counterpart." *Id.* at 405 (citing R. Mersky & D. Dunn, *Fundamentals of Legal Research* 233 (8th ed. 2002); Torres & Windsor, *State Legislative Histories: A Select, Annotated Bibliography*, 85 L. Lib. J. 545, 547 (1993)). This Court has rejected the approach required by Petitioners' preemption theory before and should do so again here.

3. Finally, without a workable rule for determining the subjective intent of state legislators, Petitioners' claim should not go forward. *See Philip Morris USA v. Williams*, 549 U.S. 346, 354 (2007) (declining to permit punitive damages for injuries to nonparty victims because it "would add a near standardless dimension to the punitive damages equation. How many such victims are there? How seriously were they injured? Under what circumstances did injury occur?"); *United States v. Ursery*, 518 U.S. 267, 284 n.2 (1997) (rejecting proposed rule as "unworkable"); *Caperton v. A.T. Massey Coal Co.*, 556 U.S. 868, 893 (2009) (Roberts,

C.J., dissenting).(a standard is problematic when it "fails to provide clear, workable guidance for future cases"). Any test for seeking the subjective intent of a state legislature would raise more questions than it could possibly answer. *See Caperton*, 556 U.S. at 893-98 (Roberts, C.J., dissenting) (listing forty questions created by the majority's test for judicial recusal).

There is no workable rule for determining the subjective intent of state legislators. How exactly could a federal court determine the subjective intent of a state legislature that passed a statute? Would the statements of a majority of then-serving legislators as to their intent be sufficient? How about language regarding legislative intent in a unanimous committee report? But what if that language was left out of the final legislation or modified? What about the statement of a bill's sponsor? What about legislators' statements made during consideration of a prior version of a statute? And how to determine the subjective intent of a legislature in a state without resources to produce much in the way of legislative history? In short, there is no workable rule for the divining of subjective legislative intent.

This lack of a workable standard suggests a possible reason why Petitioners argue so repeatedly that Virginia has "conceded" that the 1983 Virginia law in question has a purpose bringing it within the preempted field.

In conclusion, whether state legislation may be preempted should be assessed based on the plain language that the state legislature carefully arrived at. Legislative history is "often murky, ambiguous, and contradictory," and it can be cherry-picked to support a desired outcome. *Exxon Mobil Corp. v.*

Allapattah Servs., 545 U.S. 546, 568 (2005). Courts should not disregard the plain language of a state statute based on speculation of legislative intent not contained in the text. *Lexington Ins. Co. v. Precision Drilling Co.*, 830 F.3d 1219, 1221 (10th Cir. 2016) (opinion of then-Judge Gorsuch). In *Lexington*, the Tenth Circuit reasoned that "the task of trying to discern the textually unexpressed intentions of (or really attribute such intentions to) a legislative body composed of scores or often hundreds of individuals is a notoriously doubtful business." *Id.* Petitioners' preemption case depends on that "notoriously doubtful business" and invites unwarranted second-guessing of the enactments of separate sovereigns. Amici urge this Court to affirm the dismissal of Petitioners' complaint.

CONCLUSION

The judgment of the Fourth Circuit should be affirmed.

Respectfully submitted,

LISA SORONEN
STATE AND LOCAL
LEGAL CENTER
123 N. Capitol St. N.W.
Washington, DC 20001
(202) 434-4845

JOHN J. KORZEN
Counsel of Record
WAKE FOREST UNIVERSITY
SCHOOL OF LAW
APPELLATE ADVOCACY
CLINIC
Post Office Box 7206
Winston-Salem, NC 27109
(336) 758-5832
korzenjj@wfu.edu

SEPTEMBER 2018 *Counsel for Amici Curiae*

No. 16-1275

IN THE

Supreme Court of the United States

VIRGINIA URANIUM, INC., *et al.*,
Petitioners,

v.

JOHN WARREN, *et al.*
Respondents.

ON A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT

BRIEF OF NUCLEAR ENERGY INSTITUTE AS *AMICUS CURIAE* IN SUPPORT OF PETITIONERS

ELLEN C. GINSBERG
ANNE W. COTTINGHAM
JONATHAN M. RUND
NUCLEAR ENERGY INSTITUTE
1201 F Street, NW, Suite 1100
Washington, DC 20004
Telephone: (202) 739-8140

PETER C. MEIER
Counsel of Record
STEPHEN B. KINNAIRD
SEAN D. UNGER
PAUL HASTINGS LLP
875 15th Street, N.W.
Washington, D.C. 20005
Telephone: (202) 551-1700
petermeier@paulhastings.com

Counsel for Amicus Curiae Nuclear Energy Institute

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STATEMENT OF INTEREST OF AMICUS CURIAE NUCLEAR ENERGY INSTITUTE

In accordance with Supreme Court Rule 37, the Nuclear Energy Institute, Inc. ("NEI") respectfully submits this brief in support of Petitioners.[1]

NEI is responsible for establishing and advocating on legal, regulatory, technical, and policy matters affecting the commercial nuclear energy industry. Our members include licensed operators of commercial nuclear power plants in the United States, nuclear plant designers, architect/engineering firms, nuclear fuel fabricators and other nuclear material licensees, and other entities involved in all aspects of the nation's nuclear energy sector.

NEI has a pressing interest in this case. The comprehensive federal regulatory framework that Congress has established over the past sixty years undergirds the continued viability of the nuclear industry. An important feature of that framework is the federal government's exclusive authority over the regulation of radiological risks, an authority established by the Atomic Energy Act, 42 U.S.C. §§ 2011, *et seq.*, and administered today largely by the U.S. Nuclear Regulatory Commission ("NRC"). The nuclear industry relies upon that federal exclusivity. Without it, states could impose inconsistent safety

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[1] No counsel for a party authored this brief in whole or in part, and no counsel or party made a monetary contribution intended to fund the preparation or submission of this brief. No person other than *amicus curiae*, its members, or its counsel made a monetary contribution to its preparation or submission. All parties have consented in writing to the filing of this brief, and the consent letters are on file with the clerk.

standards, creating disruption, uncertainty, and higher costs. State laws that would frustrate the established regulatory framework for addressing radiological risk would not only threaten the continued availability of commercial nuclear power, but also discourage investment in new nuclear technologies and undermine national security.

SUMMARY OF ARGUMENT

In enacting the Atomic Energy Act and its amendments, Congress carefully balanced when the federal government has exclusive control over nuclear regulation and when states may regulate. The line is bright. The federal government has exclusive regulatory authority over risks associated with radiological materials, while states have some authority over non-radiological aspects of nuclear development. States may, for example, engage in ratemaking, and enact land use regulations affecting nuclear generation. But the federal government regulates radiological risks in the nuclear fuel cycle, including uranium upon its removal from its place of deposit in nature, through enrichment, nuclear fuel production, the operation in nuclear generation facilities, and the disposal of nuclear waste.

The federal government's occupation of the field of radiological risk is settled law and categorical. "[T]he safety of nuclear technology [is] the exclusive business of the Federal Government, which has occupied the entire field of nuclear safety concerns." *In re Hanford Nuclear Reservation Litig.*, 534 F.3d 986, 1003 (9th Cir. 2008) (citations omitted). Thus, any state law that seeks to regulate nuclear safety is preempted. *See, e.g., English v. Gen. Elec. Co.*, 496

U.S. 72, 81–82 (1990). As this Court has observed, the boundaries of the "pre-empted field" are defined in part "by reference to the motivation behind the state law[.]" *Id.* at 84. States are permitted to regulate areas impacting nuclear energy only "for *purposes other* than protection against radiation hazards." 42 U.S.C. § 2021(k) (emphasis added). Under this Court's authority, states may not regulate nuclear safety based on some other pretextual regulatory purpose.

But, some states have tried. Federal courts have repeatedly had to reinforce the federal government's exclusive regulatory authority over radiological safety by rejecting state laws passed with a nuclear-safety motivation or which affect nuclear safety. *See, e.g., Entergy Nuclear Vt. Yankee, LLC v. Shumlin*, 733 F.3d 393 (2d Cir. 2013); *Skull Valley Band of Goshute Indians v. Nielson*, 376 F.3d 1223 (10th Cir. 2004).

If affirmed, the Fourth Circuit's reasoning here would open the door to state regulation of radiological risks. Predicated on state-specific concerns over the radiological safety of certain mining activities (uranium milling and uranium tailings[2]), Virginia has permanently foreclosed the safe development of the largest known uranium deposit in the United States.

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[2] Milling is the process of grinding uranium ore to facilitate the separation the uranium from rock. Once ground, milling also involves chemically separating the uranium. This produces a quantity of concentrated uranium, which can be enriched, and a larger quantity of waste called "tailings." Pet. App. 54a-55a.

NEI therefore asks this Court to overturn the Fourth Circuit's judgment sanctioning the state's reach into exclusive federal authority over the safety of processing uranium. Preserving the exclusivity of the extensive federal regulatory regime governing radiological risks is necessary to maintain the legal and economic stability on which the nuclear industry continues to depend. Stability is beneficial not only to the industry. Nuclear power is the nation's largest source of carbon-free power, and a healthy nuclear industry is vital to our national security. Preserving the existing federal regulatory framework thus supports both the advancement of clean energy and our national security.

ARGUMENT

I. The Federal Government Occupies the Field of Nuclear Safety, Regulating the Entire Lifecycle of Radiological Materials from Uranium Processing to the Disposition of Spent Fuel.

The Atomic Energy Act of 1954 ("AEA" or "the Act"), reflected Congress' determination that "the national interest would be best served if the Federal Government encouraged the private sector to become involved in the development of atomic energy for peaceful purposes under a program of federal regulation and licensing." *Pacific Gas & Elec. Co. v. State Energy Resources Conservation & Dev. Comm'n*, 461 U.S. U.S. 190, 207 (1983) (citing H.R. Rep. No. 2181, 83d Cong., 2d Sess. 1-11 (1954)). That determination reflected a fundamental shift from the federal government's focus on nuclear energy for military power to its focus on spawning the private application of nuclear energy for electrical power. To

encourage the latter, the Act established the Atomic Energy Commission and the basic framework of today's nuclear regulatory regime.[3] *Roberts v. Florida Power & Light Co.*, 146 F.3d 1305, 1306 (11th Cir. 1998). *See also* 42 U.S.C. §§ 2011 *et seq.* Through the AEA, Congress has sought to achieve two goals: the promotion of civil uses of nuclear energy and the management of any resulting radiological risks. *O'Conner v. Commonwealth Edison Co.*, 13 F.3d 1090, 1105 (7th Cir. 1994) ("Congress has attempted for nearly fifty years to encourage private sector involvement in the nuclear industry and at the same time has sought to protect the public.").

Some basic background may illuminate the boundaries of state and federal regulation that this case presents. The NRC does not regulate uranium mining (*i.e.*, the physical extraction of uranium ore from the ground). *See, e.g., In the Matter of Hydro Res., Inc. (P.O. Box 777 Crownpoint, Nm 87313)*, 63 N.R.C. 510, 510 (May 16, 2006). But extensive

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[3] In 1974, Congress enacted the Energy Reorganization Act of 1974, 88 Stat. 1233, as amended, 42 U.S.C. § 5801 *et seq.*, which abolished the AEC. The AEC's functions were divided between two regulatory bodies, with its licensing and related regulatory functions transferred to the Nuclear Regulatory Commission, and all other functions, including the enrichment-services program, transferred to the Energy Research and Development Administration, § 5814(c), which later became part of the U.S. Department of Energy (DOE), *see* §§ 301 and 703 of Department of Energy Organization Act, 91 Stat. 577, 606, 42 U.S.C. §§ 7151(a) and 7293. Today, the NRC administers the federal nuclear safety regulatory scheme for commercial nuclear activities, with support from DOE and the Environmental Protection Agency as well.

federal regulations apply as soon as uranium is removed from its "place of deposit in nature." 42 U.S.C. § 2092. Once unearthed, uranium ore is milled to extract from the surrounding rock a refined uranium product referred to as "yellowcake," which is used to make nuclear fuel. *See* U.S. Energy Info. Admin.,https://www.eia.gov/energyexplained/index.php?page=nuclear_fuel_cycle (last checked July 23, 2018). This milling process also results in a byproduct—the remainder of the ore after the milling process—known as uranium "tailings," which must be processed. *Id.* The chemical processing during milling and the storage of tailings both typically take place near the mine.

NRC regulations (and some EPA regulations) govern uranium processing, including milling at or near the mine site. In particular, federal regulations require a license for any person who seeks to "possess and use source material [natural uranium is source material] in conjunction with uranium or thorium milling, or byproduct material at sites formerly associated with such milling." *See generally* 10 C.F.R. 40, App. A. These extensive federal regulations also regulate "the siting, operation, decontamination, decommissioning, and reclamation of mills and tailings or waste systems and sites at which such mills and systems are located." *Id.*; *see also* 42 U.S.C. §§ 2022(b)(1)(2), 2111; 10 C.F.R. 40.1-40.3, 40.20-21, 40.32, 40.51; 40 C.F.R. 192.

The federal regime accomplishes the AEA's goal of protecting the public from radiological risks by regulating the nuclear industry *extensively*. The administration and enforcement of the AEA and its many implementing regulations cover all stages of

nuclear development and all phases of the production, use, and disposition of uranium and other radiological materials. This includes the regulation of uranium milling, tailings management, enrichment, the transportation of nuclear fuel, the use of nuclear fuel, the disposition of nuclear waste, and related activities involving radiological risk. *See supra*. The federal government also licenses and comprehensively regulates the construction and operation of nuclear power plants. *See* https://www.nrc.gov/reactors/new-reactors/regs-guides-comm.html (last checked July 23, 2018). The federal government imposes many requirements on licensees to maintain various forms of commercial and self-insurance, here too to protect the public against radiological risks. *See generally* 10 C.F.R. 50.54(w), 140.119(a)(4). And, federal regulations also extend even beyond the lifespan of nuclear facilities, as comprehensive regulations govern the decommissioning of nuclear power plants after they have stopped production. *See, e.g.*, U.S. Nuclear Reg. Comm'n,https://www.nrc.gov/waste/decommissioning.html (last checked July 23, 2018). In short, "a nuclear power plant operator. . . is required to comply with extensive regulations promulgated by the NRC." *Int'l Bhd. of Elec. Workers, Local 97 v. Niagara Mohawk Power Corp.*, 143 F.3d 704, 707 (2d Cir. 1998).

The federal framework at the same time accomplishes the AEA's goal of promoting commercial nuclear development by regulating radiological risks *exclusively*. Given the scale of capital expenditures necessary for nuclear development, and the costs and complexity associated with nuclear research and

development in advanced nuclear technologies, the nuclear industry depends, crucially, on the legal certainty that comes with centralized federal regulation. NEI's members do not seek weak regulation. Rather, they need to know that the extensive regulatory regime governing them reflects the view of the federal expert agency charged with its administration.

Reflecting these policy objectives, Congress put in place a regulatory system making the field of nuclear safety, "the exclusive business of the Federal Government." *Pacific Gas & Elec.*, 461 U.S. at 208. The Act thus gave the AEC "exclusive jurisdiction to license the transfer, delivery, receipt, acquisition, possession and use of nuclear materials." *Pacific Gas*, 461 U.S. at 207 (citing 42 U.S.C. §§ 2014, (e), (z), (aa), 2061–2064, 2071–2078, 2091–99, 2111–14 (1976 and Supp. IV 1980)). "Upon these subjects, no role was left for the states." *Id.*

That is not to say state regulation does not touch the nuclear industry. Since the passage of the AEA, states have retained authority to regulate some economic aspects of nuclear power, as well as various types of non-radiological environmental and land use issues that also impact the nuclear industry. As this Court has observed, the relevant history here "indicates that from the passage of the Atomic Energy Act in 1954, through several revisions, and to the present day, Congress has preserved the dual regulation of nuclear-powered electricity generation[.]" *Pacific Gas*, 461 U.S. at 211–12. "[T]he federal government maintains complete control of the safety and 'nuclear' aspects of energy generation; the states exercise their traditional

authority over the need for additional generating capacity, the type of generating facilities to be licensed, land use, ratemaking, and the like." *Id.*

In 1959, for example, "to promote an orderly regulatory pattern between the Commission and State governments with respect to nuclear development and use and regulation of byproduct, source, and special nuclear materials," *see* 42 U.S.C. §2021(a)(3), Congress passed an amendment to the AEA "prohibit[ing] the states from regulating the safety aspects of nuclear development." *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 250 (1984). The 1959 amendment "was premised on [Congress'] belief that the Commission [*i.e.*, the AEC and later the NRC] was more qualified to determine what type of safety standards should be enacted in this complex area." *Silkwood*, 464 U.S. at 250. Meanwhile, "state public utility commissions or similar bodies . . . [were] "empowered to make the initial decision regarding the need for power." *Vermont Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, Inc.*, 435 U.S. 519, 550 (1978).[4]

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[4] The 1959 AEA amendment did allow the federal government "by agreements with state governors to discontinue its regulatory authority over certain nuclear materials under limited conditions," *Pacific Gas*, 461 U.S. at 209, but only where such agreements are "coordinated and compatible" with federal regulations. *Id.* (citing S.Rep. No. 870). This flexibility is not relevant here, however, as Virginia has not coordinated with the federal government to regulate uranium milling and tailings management.

II. In Deciding Federal Preemption Issues, the Atomic Energy Act Directs Courts To Examine Whether the State Acted for Radiological Safety Purposes.

Policing the respective boundaries of federal and state authority requires consideration of the purpose underlying state regulation. States may not regulate radiological safety under the cover of some other regulatory purpose. The AEA itself makes this clear. Section 2021(k) of the Act provides that states may regulate areas impacting nuclear energy only "*for purposes other than protection against radiation hazards.*" 42 U.S.C. § 2021(k) (emphasis added). By permitting regulation "for purposes other than protection against radiation hazards," Congress "underscored the distinction drawn in 1954 between the spheres of activity left respectively to the federal government and the states." *Pacific Gas*, 461 U.S. at 210. If a state's purpose in enacting the law is motivated by nuclear safety, or has an "actual effect on nuclear safety," it is preempted. *English*, 496 U.S. at 84.

Courts do not "'blindly accept the articulated purpose'" of state regulation in evaluating the motivation underlying it. *Entergy Nuclear Vt. Yankee*, 733 F.3d at 416 (quoting *Greater N.Y. Metro Food Council, Inc. v. Giuliani*, 195 F.3d 100, 108 (2d Cir. 1999)). Such unquestioned acceptance would allow states to "'nullify nearly all unwanted federal legislation.'" *Id.* Courts therefore engage in a "more searching review to determine whether a statute was enacted based upon radiological safety concerns." *Id.* In undertaking permissible state economic regulation of "a nuclear generating facility," for example, a state

may "not even consider the safety aspects." *Suffolk Cty. v. Long Island Lighting Co.*, 728 F.2d 52, 58 (2d Cir. 1984).

Upon reviewing a challenged state regulation, courts have looked carefully at the regulation's underlying purposes to resolve claims that the regulation actually targets radiological risks. For example, in *Skull Valley Band of Goshute Indians v. Nielson*, 376 F.3d 1223 (10th Cir. 2004), the Tenth Circuit considered whether the AEA preempts numerous Utah statutes, one of which designated as a state highway the only road that would have provided access to a proposed spent nuclear fuel storage facility. That statute also "requir[ed] the consent of the governor and the state legislature" before any "company engaged in the transportation or storage of spent nuclear fuel was allowed to drive on it." *Skull Valley*, 376 F.3d at 1251-52. When challenged, Utah defended the challenged statutes by claiming they were facially neutral: "According to the Utah officials, the district court erred by failing to explain how these statutes affect radiological safety decisions." *Id.* at 1252. The Utah officials "criticize[d] the district court for relying on findings regarding the legislature's motive in passing these statutes." *Id.*

The Tenth Circuit correctly rejected those arguments. "*Pacific Gas*, *Silkwood*, and *English*," the court explained, "require consideration of the purpose of the allegedly preempted statute, along with its effects." *Skull Valley*, 376 F.3d at 1252. Looking beyond the claimed facial neutrality of the statute, the court concluded that Utah had undertaken to regulate nuclear safety notwithstanding exclusive federal regulatory jurisdiction. "The state legislator

who sponsored the Road Provisions explained that they established a 'moat' around the proposed SNF [spent nuclear fuel] site, and the Governor added that the Road Provisions will add substantially to our ability as a state to protect the health and safety of our citizens against the storage of high-level nuclear waste." *Id.* (internal citations omitted). Because the record revealed that the Utah laws were enacted for reasons of radiological safety, they were preempted.

Similarly, in *Entergy Nuclear Vt. Yankee, LLC v. Shumlin*, 733 F.3d 393 (2d Cir. 2013), Vermont sought to regulate nuclear safety with a law providing that a nuclear facility long in operation could continue to operate only with the consent of the state legislature. *Entergy Nuclear*, 733 F.3d at 416. Vermont argued that two non-safety purposes within the state's regulatory authority, including the promotion of an "increased use of a diverse array of renewable power sources; and . . . of energy sources that are more cost-effective," motivated the law. *Id.*

The Second Circuit granted that "Vermont's asserted policy interests would not necessarily interfere with the preempted concern of radiological safety," 733 F.3d at 416, but noted correctly that the "inquiry does not end at the text of the statute." *Id.* As the Second Circuit stated, if the preemption analysis ended with the text of the law or an express purpose, a state could regulate nuclear safety "by simply publishing a legislative committee report articulating some state interest or policy—other than frustration of the federal objective—that would be tangentially furthered by the proposed state law." *Id.* (citation omitted).

The Second Circuit thus went on to consider "the legislative record," which contained "references, almost too numerous to count, [that] reveal legislators' radiological safety motivations and reflect their wish to empower the legislature to address their constituents' fear of radiological risk, and [legislators'] belief that the plant was too unsafe to operate." *Id.* at 420. The Vermont law was therefore preempted. *Id.*

This Court, too, has concluded both that "[a] state moratorium on nuclear construction grounded in safety concerns falls squarely within the prohibited field" of state regulation, and that "a state judgment that nuclear power is not safe enough to be further developed would conflict" with Congress' controlling view. *Pacific Gas*, 461 U.S. at 213. Still other courts have likewise recognized that "a state law related to nuclear power is preempted if it . . . is motivated by safety concerns." *Vermont Yankee Nuclear Power Corp. v. Entergy Nuclear Vermont Yankee, LLC*, 683 F.3d 1330, 1347 (Fed. Cir. 2012);[5] *see also United States v. Manning*, 527 F.3d 828, 836–37 (9th Cir. 2008) ("The CPA is preempted because it regulates within the field that is occupied by the AEA"); *United States v. Commonwealth of Kentucky*, 252 F.3d 816, 823 (6th Cir. 2001) ("The permit conditions therefore represent an attempt by the Cabinet to regulate materials covered by the AEA based on the Cabinet's

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[5] In other preemption contexts, too, courts have emphasized the "real purpose of the state law," as opposed to "the area of law that the state statute addresses." *Movsesian v. Victoria Versicherung AG*, 670 F.3d 1067, 1075 (9th Cir. 2012) (citations omitted); *see also Am. Ins. Ass'n v. Garamendi*, 539 U.S. 396, 426 (2003) (rejecting stated purpose of state law).

safety and health concerns, and are thus preempted.").

III. The Decision Below Conflicts With the Federal Government's Exclusive Regulatory Authority over the Radiological Risk of Nuclear Materials, on which the Nuclear Industry Has Long Relied.

In this case, as in *Skull Valley* and *Entergy Nuclear*, the respondent states or state officials defended their attempt to regulate nuclear safety by arguing their laws were neutrally stated. Petitioners have alleged otherwise.

In the 1970s, the largest known uranium ore deposit in the United States was discovered in Virginia. Pet. App. 5a. The Virginia General Assembly reacted by calling on state regulators to "evaluate the environmental effects . . . and any possible detriments to the health safety, and welfare of Virginia citizens which may result from uranium exploration, mining, or milling." *Id.* (quoting 1981 Va. Acts 1404). In 1982, the Virginia General Assembly permitted some uranium exploration, but imposed a one-year moratorium on uranium mining. 1982 Va. Acts 426. A year later, Virginia extended its ban on uranium mining indefinitely. 1983 Va. Acts 3; Pet. App. 178a. The 1983 moratorium extension also created a working group to consider "all pathways which radionuclides and other contaminants may enter or affect ground waters, receiving surface waters, and the air and the biota and be transmitted to critical receptors as result of mining, milling, and tailing management at the specific site." 1983 Va. Acts 3; Pet. App. 183a-84a. Two years later, the

commission and working group suggested that under certain conditions the mining moratorium should be lifted. *See* Pet. App. 5a. Notwithstanding that recommendation, and despite Virginia Uranium Inc.'s longstanding efforts since to have the ban lifted, a complete ban on uranium mining remains in effect.

Petitioners Virginia Uranium Inc.'s (*et al.*) suit asked the United States District Court for the Western District of Virginia to declare the ban preempted by federal law, and to issue an injunction compelling Virginia to consider uranium mining permits. In response, state officials moved to dismiss, requiring the district court to accept the Petitioners' factual allegations for the purposes of resolving that motion. And indeed the district court acknowledged Virginia Uranium's allegation "that the moratorium rested on 'radiological safety concerns' associated with milling and tailings management," *see* Pet. App. 68a, as the text of the 1983 Act—in particular its reference to "radionuclides and other contaminants," and "mining, milling, and tailing management"—indicates. Nevertheless, the district court granted the motion to dismiss on the grounds that the text of Virginia's prohibition itself only applied to mining. *Id.* at 71a-80a.

On appeal to the Fourth Circuit, Virginia Uranium Inc. emphasized its allegations in the district court that safety concerns regarding milling and tailings *motivated* Virginia's ban. In affirming, a divided panel "agree[d] that milling and tailings storage are 'activities' under section 2021(k) because they are regulated by the NRC, and states may therefore not regulate them except for purposes other than protection against radiation hazards." Pet. App.

at 13a-14a (citing 42 U.S.C. §§ 2021, 5842, 7918-19; 10 C.F.R. § 40.3). The majority nonetheless held that "the plain language of the commonwealth's ban does not mention uranium or tailings storage," and thus there was no need to look to the State's purpose in passing the law. Pet. App. 14a.

The majority's conclusion that the ban's language renders irrelevant Virginia's motivation for the ban is inconsistent with the Atomic Energy Act and this Court's approach to the Act's preemptive effect. As Judge Traxler explained in dissent, Virginia banned uranium mining "because of radiological safety concerns regarding uranium milling and tailings management," ignoring that "Congress has taken away a state's ability to limit mining for this particular reason." Pet. App. 20a. Judge Traxler explained that the fact that the text of the statute addresses mining and not safety is simply not determinative in the preemption analysis. Pet. App. 42a. Instead, and consistent with *Pacific Gas*, *Skull Valley*, and *Entergy Nuclear*, Judge Traxler would have held that "state statutes enacted to protect against the radiological dangers of activities the AEA regulates are preempted *regardless of whether the statutory text reveals that purpose and regardless of whether the statute expressly prohibits an activity the Act regulates.*" *Id.* (emphasis original). The Petitioners' allegations and the legislative history leading to Virginia's ban indicate Virginia was motivated by radiological risks, but the Fourth Circuit majority looked past that history in limiting its analysis to the statutory language. Pet App. 40a (Traxler, J. dissenting).

In failing to consider the State's purpose in passing the mining ban, the majority departed from this Court's instructions in *Pacific Gas* and *English*, and, in doing so, also failed to adhere to the boundaries Congress has established for state regulation.

Virginia can regulate uranium mining for reasons genuinely unrelated to the safety of nuclear source materials or activities related to the risks of processing uranium.

But Virginia may not ban or suspend uranium mining motivated, in particular, by safety concerns related to the processing of uranium once extracted from the earth. A ban targeting the radiological risks of those activities interferes with the exclusive authority of the federal government and achieves something indirectly that a state could not do directly. Such a result turns preemption on its head, allowing a state to purposefully regulate radiological risks and short circuit federal regulation so long as the state does not mention safety in the language of the law.

IV. A Healthy Nuclear Industry Is Vital for National Security.

As Judge Traxler noted in his dissent below, "[t]he stakes in this case are significant," Pet. App. at 21a. Nuclear power is an integral part of the nation's domestic energy supply. Currently, the United States has 99 operating commercial nuclear reactors in 30 states that produce nearly 20 percent of our nation's electricity and nearly 60 percent of our carbon-free electricity. *See* U.S. Dept. of

Energy,https://www.energy.gov/ne/nuclear-power-summary-may-2018 (last checked July 23, 2018). A healthy nuclear industry is necessary both to satisfy the country's power demands and to meet clean air goals.

A healthy nuclear industry is important also for other aspects of national security. Indeed, there is broad expert consensus that U.S. national security requires a strong domestic nuclear industry, given that the industry in various ways supports not only the country's defense mission but also global nonproliferation. *See, e.g.*, M. Wallace, A. Roma, & S. Desai, Back from the Brink: A Threatened Nuclear Energy Industry Compromises National Security (July 2018) (the domestic commercial nuclear energy industry is of "critical importance to the country for national defense, research, economic growth, geopolitics, and international nonproliferation); Energy Futures Initiative, *The U.S. Nuclear Energy Enterprise: A Key National Security Enabler* (Aug. 2017) (explaining the central importance of a healthy domestic nuclear industry to national security); J. Carl & D. Fedor, *Keeping the Lights on at America's Nuclear Power Plants* (2017) (a robust nuclear power industry is necessary to protect U.S. leadership in technology, safeguard national security, and to reduce carbon emissions). For example, a strong commercial nuclear industry is essential to the national-defense supply chain, including for the nation's nuclear powered navy, which depends on the nuclear industry. *See The U.S. Nuclear Energy Enterprise, supra*, at 8 (explaining why "a strong domestic supply chain is needed to provide for nuclear Navy requirements"). *See also id.* at 9

("Without a strong nuclear energy program . . . the supply chain for both civilian and national security objectives will be challenging.").

The importance of the nuclear industry to national security can be seen, for instance, in expressions by Senators Cotton, Cruz and Inhofe, at the *certiorari* stage of this case, of their "support [for] the prudent development of U.S. natural resources [i.e., uranium]." *See Brief of Senator Tom Cotton, Senator Jim Inhofe, and Senator Ted Cruz as Amicus Curiae in Support of Petitioner* ("Cotton Amicus"), Case No. 16-1275 at 18 (May 25, 2017). But notwithstanding consistent (and bipartisan) recognition at the federal level of the importance of the nuclear industry for our economy, climate, and national security, the fact is that challenges at the local level sometimes remain. As Senator Cotton put it, there can be a "public penchant to stigmatize localities hosting nuclear facilities or to otherwise perceive the development of nuclear energy as unsafe." Cotton Amicus at 13 (citation omitted). "Public hostility is frequently manifested in state or local laws that attempt to dismantle what the federal government has already approved." *Id.*

To allow states to regulate radiological risks would undermine the federal regulatory framework on which the industry has long relied. Congress determined decades ago that exclusive federal regulation of radiological safety would best promote commercial nuclear development. New layers of state regulation on top of—or at odds with—the robust federal regime could prove counterproductive and unnecessarily costly to the industry supplying one-fifth of U.S. electricity.

There is much more than an abstract principle at stake here. If courts begin to allow state regulation of radiological safety so long as the regulation's language makes no mention of that goal and regulates indirectly, Congress' careful balance would be undone. Consider, as an illustration, the implication if in *Skull Valley*, *Entergy Nuclear*, and this case the state regulations targeting radiological risks were all allowed as within state authority. In that scenario, going forward any state could prevent the processing of uranium source materials (like Virginia is attempting), the operation of a nuclear power plant (like Vermont attempted), and the storage of spent nuclear fuel (like Utah attempted). That result—restricting the lifecycle of uranium production, use, and disposition—certainly would not leave much of a role for federal regulation. Such a result cannot square with the AEA, basic preemption principles, or with Congress' aim to promote a nuclear industry that in many ways has become so important to the nation and its security.

CONCLUSION

For the above reasons, the judgment of the Court of Appeals should be reversed.

Respectfully submitted,

PETER C. MEIER
Counsel of Record
STEPHEN B. KINNAIRD
SEAN D. UNGER
PAUL HASTINGS LLP
875 15th Street N.W.
Washington, DC 2005
(202)551-1700
petermeier@paulhastings.com

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IN THE
Supreme Court of the United States

VIRGINIA URANIUM, INC., ET AL.,
Petitioners,

v.

JOHN WARREN, ET AL.,
Respondents.

On Writ of Certiorari
to the United States Court of Appeals
for the Fourth Circuit

BRIEF OF PREEMPTION LAW PROFESSORS AS *AMICI CURIAE* IN SUPPORT OF RESPONDENTS

DEREK T. HO
Counsel of Record
JULIUS P. TARANTO
MICHAEL S. QIN
KELLOGG, HANSEN, TODD,
FIGEL & FREDERICK,
P.L.L.C.
1615 M Street, N.W.
Suite 400
Washington, D.C. 20036
(202) 326-7900
(dho@kellogghansen.com)

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INTEREST OF *AMICI CURIAE*[1]

Amici are law professors who specialize in preemption law, constitutional law, and/or administrative law. Through their academic work, *amici* are knowledgeable about the issues in this case.

- William W. Buzbee is a Professor of Law at Georgetown University Law Center. His publications focus on environmental, regulatory, and federalism issues. Among other works, Professor Buzbee is the editor and a contributor to *Preemption Choice: The Theory, Law and Reality of Federalism's Core Question* (William W. Buzbee ed., Cambridge Univ. Press 2009).
- William Funk is the Lewis & Clark Distinguished Professor of Law, Emeritus, at Lewis & Clark Law School. His publications include *Judicial Deference and Regulatory Preemption by Federal Agencies*, 84 Tul. L. Rev. 1233 (2010), and *Preemption by Federal Agency Action, in Preemption Choice: The Theory, Law, and Reality of Federalism's Core Question* 214 (William W. Buzbee ed., Cambridge Univ. Press 2009).
- Thomas O. McGarity is the Joe R. and Teresa Lozano Long Endowed Chair in Administrative Law at the University of Texas at Austin School of Law. He is the author of *The Preemption War: When Federal Bureaucracies Trump Local Juries* (Yale Univ. Press 2008).

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[1] Pursuant to Supreme Court Rule 37.6, counsel for *amici* represent that they authored this brief in its entirety and that none of the parties or their counsel, nor any other person or entity other than *amici* or their counsel, made a monetary contribution intended to fund the preparation or submission of this brief. Pursuant to Rule 37.3(a), counsel for *amici* also represent that all parties have consented to the filing of this brief.

- Sidney A. Shapiro is the Frank U. Fletcher Chair of Administrative Law at Wake Forest University School of Law. As a leading expert in administrative procedure and regulatory policy, he has written ten books, contributed chapters to seven additional books, and authored or coauthored more than 55 articles.
- Brian Wolfman is an Associate Professor of Law and the Director of the Appellate Courts Immersion Clinic at Georgetown Law School. In addition to his extensive litigation experience (including five winning oral arguments before this Court), Professor Wolfman has often written on the intersection of state tort law and federal preemption doctrine.

INTRODUCTION

Legislative-motive inquiries have no place in this Court's Supremacy Clause jurisprudence. The Court does not embark on that fraught enterprise in any other area of preemption doctrine. And for good reason: a motive-based standard raises intractable conceptual and practical problems, and entails significant incursion into state sovereignty. Neither the Atomic Energy Act of 1954 nor this Court's decisions interpreting it require this Court to depart from its well-worn path. The Court should affirm.

SUMMARY OF ARGUMENT

Preemption in this case should not turn on the subjective motivations of the state officials who enacted Virginia's ban on uranium mining. In no area of preemption doctrine does the result turn on the purpose of the state law rather than its effects. Likewise, in the converse scenario, this Court has explicitly held that a benign state purpose (i.e., a purpose not to obstruct federal law) cannot save a state statute that has the effect of being an obstacle to Congress's goals. Petitioners' proposed test would thus create an aberration in preemption doctrine—a unique exception for the field of nuclear safety.

Legislative-motive inquiries are also anomalous in constitutional doctrine beyond preemption. Before the 1970s, this Court almost never considered legislative purpose. Since then, it has done so only in narrow areas like equal protection and the Establishment Clause. Even in those areas, an illicit motive generally cannot, standing alone, make a law unconstitutional. Petitioners' position not only departs from longstanding preemption doctrine but adopts a mode of analysis that is highly disfavored in modern constitutional law generally.

The Court's reluctance to inquire into legislative motive is well justified. As this Court recently explained, such inquiries raise intractable conceptual and practical problems. *See Shady Grove Orthopedic Assocs., P.A. v. Allstate Ins. Co.*, 559 U.S. 393, 404 (2010). In the preemption context, such an inquiry also poses a serious threat to federalism. This Court should therefore reject petitioners' legal standard and affirm.

ARGUMENT

Of the three types of preemption this Court has identified—express, field, and conflict preemption—only field and conflict preemption are at issue in this case, and this brief addresses petitioners' arguments regarding the former. The question in field preemption cases is whether Congress "intended to foreclose any state regulation in the *area*, irrespective of whether state law is consistent or inconsistent with federal standards." *Oneok, Inc. v. Learjet, Inc.*, 135 S. Ct. 1591, 1595 (2015). As "[i]n all pre-emption cases," field-preemption analysis begins "with the assumption that the historic police powers of the States were not to be superseded by the Federal Act unless that was the clear and manifest purpose of Congress." *Wyeth v. Levine*, 555 U.S. 555, 565 (2009) (alteration in original).

I. A Legislative-Motive Inquiry Here Would Be Unique In Preemption Doctrine And An Outlier In Constitutional Doctrine Generally

A. This Court Has Consistently Held That States' Intent Is Irrelevant to Preemption

1. This Court has long held that a state law is preempted only when it regulates in a field properly subject to federal regulation. The touchstone is what the State actually did, not why it did it.[2] The Court's decision in *Shady Grove Orthopedic Associates, P.A. v. Allstate Insurance Co.*, 559 U.S. 393 (2010), is illustrative. There, it did not matter what the state legislature might have intended to do or "[t]he manner

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[2] State legislative intent is equally irrelevant in conflict preemption, of which "field pre-emption may be understood as a species," *English v. General Elec. Co.*, 496 U.S. 72, 79 n.5 (1990), but petitioners do not invoke legislative intent in their conflict-preemption arguments here.

in which the law could have been written . . . ; what matter[ed] [wa]s the law the legislature *did* enact." *Id.* at 403.

Shady Grove went on to explain some of the fundamental problems that would arise from a legislative-motive-based approach to preemption. For one thing, it would produce arbitrary outcomes: "[O]ne State's statute could survive pre-emption . . . while another State's identical law would not, merely because its authors had different aspirations." *Id.* at 404. For another, it would be unfriendly to state prerogatives to look into motive rather than simply "accept[ing] the [state] law as written and test[ing] the validity of the Federal [law]." *Id.* For yet another, it would raise tremendous practical problems for courts. "Many laws further more than one aim, and the aim of others may be impossible to discern." *Id.* Trial courts would nonetheless have to attempt "to discern, in every [relevant] case, the purpose behind any putatively pre-empted state . . . rule." *Id.* That "task w[ould] often prove arduous"; "[h]ard cases" would "abound"; and "federal judges would be condemned to poring through state legislative history—which may be less easily obtained, less thorough, and less familiar than its federal counterpart." *Id.* at 404-05.

2. *Shady Grove* is just one in a long list of cases, covering a wide range of federal statutes, all with the same punchline: Not even the objective purpose of a state law, to say nothing of its legislators' subjective motivations, is relevant in preemption analysis. No area of modern preemption doctrine works otherwise—not immigration, *Arizona v. United States*, 567 U.S. 387 (2012); not arbitration, *AT&T Mobility LLC v. Concepcion*, 563 U.S. 333 (2011); not foreign affairs, *Crosby v. National Foreign Trade Council*, 530 U.S.

363 (2000); not railroads, *Kurns v. Railroad Friction Prods. Corp.*, 565 U.S. 625 (2012); and not energy rates, *Hughes v. Talen Energy Mktg., LLC*, 136 S. Ct. 1288 (2016), to list just a few.

Indeed, almost 50 years ago, this Court expressly overruled an earlier approach to preemption that turned on the purpose of state law. In *Kesler v. Department of Public Safety*, 369 U.S. 153 (1962), and *Reitz v. Mealey*, 314 U.S. 33 (1941), the Court had upheld state laws that—by leaving debts arising from car accidents in place regardless of bankruptcy—interfered with the goal of federal bankruptcy law to give debtors a clean slate. The Court in those two cases reasoned that the state laws were not preempted because their purposes were to promote road safety, rather than to provide relief to creditors. *See Kesler*, 369 U.S. at 174; *Reitz*, 314 U.S. at 37

That approach ended in *Perez v. Campbell*, 402 U.S. 637 (1971), in which the Court held that it would "no longer adhere to the aberrational doctrine of *Kesler* and *Reitz* that state law may frustrate the operation of federal law as long as the state legislature in passing its law had some purpose in mind other than one of frustration." *Id.* at 651-52. The purpose-driven approach of *Kesler* and *Reitz*, *Perez* explained, was aberrant because it removed the focus from the effects of the state law at issue, which ran contrary to preemption doctrine as far back as Chief Justice Marshall's opinion in *Gibbons v. Ogden*, 22 U.S. (9 Wheat.) 1 (1824). *See* 402 U.S. at 649-50 (also citing *Hines v. Davidowitz*, 312 U.S. 52, 67 (1941); *Sola Elec. Co. v. Jefferson Elec. Co.*, 317 U.S. 173, 176 (1942); *Hill v. Florida ex rel. Watson*, 325 U.S. 538, 542-43 (1945); *Free v. Bland*, 369 U.S. 663, 666 (1962); *Colorado Anti-Discrimination Comm'n v. Continental*

Air Lines, Inc., 372 U.S. 714, 722 (1963); *Sears, Roebuck & Co. v. Stiffel Co.*, 376 U.S. 225, 229 (1964); *Nash v. Florida Indus. Comm'n*, 389 U.S. 235, 240 (1967)); *see also Florida Lime & Avocado Growers, Inc. v. Paul*, 373 U.S. 132, 141-42 (1963) (focusing on "whether the purposes of the two laws are parallel or divergent" tends to "obscure more than aid" in determining whether state law is preempted by federal law) (emphasis omitted); *Napier v. Atlantic Coast Line R.R. Co.*, 272 U.S. 605, 612 (1926) (preemption analysis turns not on whether federal and state laws "are aimed at distinct and different evils" but on whether they "operate upon the same object"). The Court thus "conclude[d] that *Kesler* and *Reitz* can have no authoritative effect to the extent they are inconsistent with the controlling principle that any state legislation which frustrates the full effectiveness of federal law is rendered invalid by the Supremacy Clause." *Perez*, 402 U.S. at 652.

In the years since *Perez*, this Court has held the same line, time and again, as litigants try to save state statutes from preemption by pointing to benign legislative purposes. The Court explained in *Hughes v. Oklahoma*, 441 U.S. 322 (1979), that, "when considering the purpose of a challenged statute, this Court is not bound by '[t]he name, description or characterization given it by the legislature or the courts of the State,' but will determine for itself *the practical impact* of the law." *Id.* at 336 (quoting *Lacoste v. Department of Conservation of Louisiana*, 263 U.S. 545, 550 (1924)) (emphasis added; alteration in original). *Alessi v. Raybestos-Manhattan, Inc.*, 451 U.S. 504 (1981), held that, "[w]hatever the purpose or purposes of the New Jersey statute, we conclude that it 'relate[s] to pension plans' governed by [the Employee

Retirement Income Security Act of 1974 ('ERISA')]." *Id.* at 524 (second alteration in original). The Court in *International Paper Co. v. Ouellette*, 479 U.S. 481 (1987), noted that *Perez* stands for the proposition that "effect rather than purpose of a state statute governs pre-emption analysis." *Id.* at 498 n.19. In *Mackey v. Lanier Collection Agency & Service, Inc.*, 486 U.S. 825 (1988), the Court again reiterated the core idea of *Perez*: "Legislative 'good intentions' do not save a state law within the broad pre-emptive scope of [ERISA] § 514(a)." *Id.* at 830. In *Gade v. National Solid Wastes Management Ass'n*, 505 U.S. 88 (1992), the Court similarly held that, "[w]hatever the purpose or purposes of the state law, pre-emption analysis cannot ignore the effect of the challenged state action on the pre-empted field. The key question is thus at what point the state regulation sufficiently interferes with federal regulation that it should be deemed pre-empted." *Id.* at 107. And in *Gobeille v. Liberty Mutual Insurance Co.*, 136 S. Ct. 936 (2016), the Court featured the now-familiar refrain that "[a]ny difference in purpose does not transform this direct regulation of a central matter of [ERISA] plan administration into an innocuous and peripheral set of additional rules." *Id.* at 946 (citation omitted). State purpose and motive simply have no role in preemption analysis.

B. Judicial Scrutiny of Legislative Motive Is Disfavored in Constitutional Law Generally

In constitutional doctrine more generally, inquiries into legislative intent (particularly subjective motive) are also rare and increasingly disfavored.

In the nineteenth century, this Court "frequently rebuffed calls for judicial scrutiny of legislative motivation." Richard H. Fallon, Jr., *Constitutionally Forbidden Legislative Intent*, 130 Harv. L. Rev. 523,

534 (2016). That trend began early in our constitutional history. In *Fletcher v. Peck*, 10 U.S. (6 Cranch) 87 (1810), Chief Justice Marshall held that a court of law "cannot sustain a suit . . . founded on the allegation that the act is a nullity, in consequence of the impure motives which influenced certain members of the legislature which passed the law." *Id.* at 131.

For most of the twentieth century, legislative-intent inquiries remained both rare and restricted in scope.[3] The 1970s marked a shift in the Court's willingness to probe legislative intent. *See* Michael J. Klarman, *An Interpretive History of Modern Equal Protection*, 90 Mich. L. Rev. 213, 284-85 (1991). The inquiry became relevant in a limited number of contexts, including the Equal Protection Clause, the dormant Commerce Clause, the Establishment Clause, and the Free Exercise Clause. *See* Fallon, 130 Harv. L. Rev. at 525-26. Yet even in these areas the decisional significance of legislative intent remained quite limited. Impermissible legislative intent is, alone, sufficient to strike down a law in only a few cases.[4]

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[3] *See Tenney v. Brandhove*, 341 U.S. 367, 377 (1951) ("The holding of this Court in Fletcher v. Peck, that it was not consonant with our scheme of government for a court to inquire into the motives of legislators, has remained unquestioned.") (citation omitted); *United States v. O'Brien*, 391 U.S. 367, 383 (1968) ("It is a familiar principle of constitutional law that this Court will not strike down an otherwise constitutional statute on the basis of an alleged illicit legislative motive."); *Palmer v. Thompson*, 403 U.S. 217, 224 (1971) ("[N]o case in this Court has held that a legislative act may violate equal protection solely because of the motivations of the men who voted for it.").

[4] *Lemon v. Kurtzman*, 403 U.S. 602 (1971), and its progeny would overturn laws solely because their purpose was to promote religion. *See, e.g., McCreary Cty. v. ACLU of Kentucky*, 545 U.S. 844, 860 (2005). Many Justices have questioned the continuing validity of the *Lemon* test. *See Lamb's Chapel v. Center Moriches*

What is more, the nature of inquiries into legislative purpose, motive, and intent has changed even since the 1970s. Although the Court used to consider the subjective psychological motives of state officials,[5] more recent cases aim the legislative-intent inquiry at something like "objective purpose." *See id.* at 541-43. This version of legislative intent may be discerned in a manner akin to ordinary statutory interpretation, including inferring purpose from the distinctive effects of a law. *See, e.g., Shaw v. Reno*, 509 U.S. 630, 642 (1993) (striking a peculiarly shaped legislative district that was "so extremely irregular on its face that it rationally c[ould] be viewed only as an effort to segregate the races for purposes of voting").

II. Preemption Should Not Turn On Subjective Legislative Intent

Petitioners' position—that preemption under the Atomic Energy Act depends on subjective inquiry into state legislative motive—would raise numerous conceptual and practical problems. It would also implicate serious federalism concerns.

Union Free Sch. Dist., 508 U.S. 384, 398 (1993) (Scalia, J., concurring in the judgment) (explaining that six of the Justices serving in 1993 had criticized *Lemon* or joined opinions doing so).

[5] *See, e.g., Wallace v. Jaffree*, 472 U.S. 38, 56-57 (1985) (relying on legislative history to support a finding that the legislature acted with a constitutionally forbidden purpose of promoting prayer in public schools); *Personnel Adm'r v. Feeney*, 442 U.S. 256, 279 (1979) (stating that a "'[d]iscriminatory purpose' . . . implies that [a legislature] . . . selected or reaffirmed a particular course of action at least in part 'because of,' not merely 'in spite of,' its adverse effects upon an identifiable group"); *Village of Arlington Heights v. Metropolitan Hous. Dev. Corp.*, 429 U.S. 252, 265-66 (1977); *Church of the Lukumi Babalu Aye, Inc. v. City of Hialeah*, 508 U.S. 520, 540-41 (1993) (plurality opinion); *see also* Fallon, 130 Harv. L. Rev. at 537.

A. Legislative-Intent Inquiries Raise Serious Conceptual Problems

As this Court has recognized, it is doubtful whether the idea of *collective* intent—of the group of legislators and executive-branch officials who enacted the state legislation—is even intellectually coherent. As this Court stated, "[w]hat motivates one legislator to vote for a statute is not necessarily what motivates scores of others to enact it." *Pacific Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 216 (1983) (citing *O'Brien*, 391 U.S. at 383-84); *see* 2 Joseph Story, *Commentaries on the Constitution of the United States* 533 (Boston, Hilliard, Gray & Co. 1833) (mindsets of individual legislators might be "opposite to, or wholly independent of each other"). There is no reason to expect consistency in the disparate motives of different legislators for laws that may themselves "further more than one aim." *Shady Grove*, 559 U.S. at 404. Thus, as Justice Scalia wrote, looking for the purpose of a multimember body is likely "impossible." *Edwards v. Aguillard*, 482 U.S. 578, 636 (1987) (Scalia, J., dissenting); *see also* Kenneth A. Shepsle, *Congress Is a "They," Not an "It": Legislative Intent as Oxymoron*, 12 Int'l Rev. L. & Econ. 239, 249 (1992) (it is "fruitless to attribute intent to the product of [legislators'] collective efforts"); Robert C. Farrell, *Legislative Purpose and Equal Protection's Rationality Review*, 37 Vill. L. Rev. 1, 11 (1992) ("If legislative purpose is the mere aggregation of the motivations of individual legislators, then there seems no escaping the conclusion that the very idea of legislative purpose is incoherent."); John F. Manning, *Textualism and Legislative Intent*, 91 Va. L. Rev. 419, 427-32 (2005); Caleb Nelson, *What Is Textualism?*,

91 Va. L. Rev. 347, 353-57 (2005); Ronald Dworkin, *Law's Empire* 321-33 (1986).

Even if collective intent were a coherent idea, to go looking for it outside the well-marked boundaries of statutory interpretation would raise a slew of other difficult conceptual problems. *See* Fallon, 130 Harv. L. Rev. at 537-41. What legal rules determine how and when to ascribe an intention to a particular legislator? What if a forbidden intention existed but was not necessary to a legislator's vote? What percentage of legislators need to share a forbidden intention for a law to be tainted? What if the illicit intentions of some legislators (or lobbyists) drove them to persuade others to vote for a bill on permissible grounds—is that a sufficient causal link to bad intent? And, for all of these questions, what source of authority guides courts' answers?

B. Legislative-Intent Inquiries Raise Serious Practical Problems

The practical difficulties with discerning collective intent are just as large and no less crippling to the concrete judicial enterprise of deciding cases.

1. *A motive-based inquiry would produce arbitrary outcomes.* It is clear, as the Federal Government acknowledges, that "States retain the authority to regulate conventional uranium mining—or to prohibit it altogether." U.S. Cert. Br. 16, 18. Thus, under petitioners' rule, *Shady Grove*'s premonition would come to pass, in which "one State's statute could survive pre-emption . . . while another State's identical law would not, merely because its authors had different aspirations." 559 U.S. at 404; *see also Pacific Gas*, 461 U.S. at 216 ("it would be particularly pointless for us to engage in such inquiry here when it is clear that the states have been allowed to retain authority . . . to

halt the construction of new nuclear plants"); *O'Brien*, 391 U.S. at 384 ("We decline to void . . . legislation which Congress had the undoubted power to enact and which could be reenacted in its exact form if the same or another legislator made a 'wiser' speech about it.").

To illustrate: If a state law subsidized coal or wind power, it would be preempted under petitioners' view of the Atomic Energy Act if the legislators were motivated in part by a belief that increased use of those power sources would reduce demand for—and the radiological hazard from—nuclear energy. Another State's identical subsidy would survive if the benefit of reducing hazards from nuclear power never entered the discussion. Whatever Congress intended to preempt in the Atomic Energy Act, it cannot have meant to do that.

2. *Collective motive is extraordinarily difficult for courts to discern.* Even putting aside the conceptual difficulties surrounding *collective* intent, inquiry into the subjective motives of even a single state official is usually "an unsatisfactory venture." *Pacific Gas*, 461 U.S. at 216. How will courts decide with any confidence what state lawmakers were thinking when they enacted the statute in this case *35 years ago*? What is the relevance, if any, of unsuccessful efforts to repeal that law that did not even come to a vote? Does the intent of those subsequent legislators count? What about the concerns of staffers, lobbyists, concerned citizens, and other interest groups? What significance should courts attach to legislators' public statements to the media or newspaper articles on the "realities of the legislative bargaining?" *Edwards*, 482 U.S. at 638 (Scalia, J., dissenting). Petitioners here rely on both. What about legislators' *private* statements to friends? Will the court consider "postenactment testimony from legislators, obtained expressly for the lawsuit?"

Id. "All of these sources, of course, are eminently manipulable. Legislative histories can be contrived and sanitized, favorable media coverage orchestrated, and postenactment recollections conveniently distorted." *Id.*

And if discerning federal legislative history were not difficult enough, adoption of petitioners' position would require federal judges "to por[e] through state legislative history—which may be less easily obtained, less thorough, and less familiar than its federal counterpart." *Shady Grove*, 559 U.S. at 405 (citing Roy M. Mersky & Donald J. Dunn, *Fundamentals of Legal Research* 233 (8th ed. 2002); Jose R. Torres & Steve Windsor, *State Legislative Histories: A Select, Annotated Bibliography*, 85 L. Lib. J. 545, 547 (1993)). All of these questions—or, rather, the fact that "there are no good answers," *Edwards*, 482 U.S. at 638 (Scalia, J., dissenting)—explain why the Court has generally avoided legislative-motive inquiries, and why it should do so here.[6]

C. Legislative-Intent Inquiries Raise Serious Federalism Problems

Turning preemption on legislative motive would also trample important state sovereignty interests.

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[6] For these reasons, scholars have argued that an improper motive should never, standing alone, invalidate a state law. *See* Laurence H. Tribe, *The Mystery of Motive, Private and Public: Some Notes Inspired by the Problems of Hate Crime and Animal Sacrifice*, 1993 Sup. Ct. Rev. 1, 23 (arguing that illicit legislative motive should never be sufficient to invalidate laws regulating conduct); Richard L. Hasen, *Bad Legislative Intent*, 2006 Wis. L. Rev. 843, 846 (proof of bad intent "should be neither necessary nor sufficient for an election law challenge to succeed"); Fallon, 130 Harv. L. Rev. at 529 ("[C]ourts should never invalidate legislation *solely* because of the subjective intentions of those who enacted it.").

"In preemption analysis," courts assume "that the historic police powers of the States are not superseded unless that was the clear and manifest purpose of Congress." *Arizona*, 567 U.S. at 400. An inquiry into legislative motive would harm the very state sovereignty interests that the presumption against preemption aims to protect.

A preemption inquiry into state motives "is perilous . . . not just for the judges who will very likely reach the wrong result, but also for the legislators who find that they must assess the validity of proposed legislation—and risk the condemnation of having voted for an unconstitutional measure—not on the basis of what the legislation contains, nor even on the basis of what they themselves intend, but on the basis of what *others* have in mind." *Edwards*, 482 U.S. at 638-39 (Scalia, J., dissenting). It would also create tremendous uncertainty about the power left to the States. (For this reason, *Shady Grove* stated that, rather than reshaping text to a federal court's conception of purpose, "the state-friendly approach [is] to accept the law *as written*." 559 U.S. at 404 (emphasis added).) Some questions that might daunt state legislators here: How much concern for radiological hazards is too much? Who has to express that concern, and in what contexts? If everyone who voted for a law had an independent, sufficient reason to pass it, has the State acted within the federal sphere or not? And is there any way to control whether a law runs into the federal field, when one legislator with permissible motives cannot control the motives or intentions of other legislators, commentators, or officials?

The natural result of such judicial inquiries will be to stifle debate. Democracy benefits from debate on public issues that is "uninhibited, robust, and wide-open." *New York Times Co. v. Sullivan*, 376 U.S. 254,

270 (1964). For that reason, and in accordance with the longstanding principle of legislative immunity, both the federal and numerous state constitutions (including Virginia's) have Speech and Debate Clauses to preclude judicial "question[ing]" of legislators for statements made or votes cast in legislative session. *See* U.S. Const. art. I, § 6, cl. 1; Va. Const. art. IV, § 9. A central purpose of such clauses is "to protect legislative independence." *United States v. Gillock*, 445 U.S. 360, 369 (1980); *accord Edwards v. Vesilind*, 790 S.E.2d 469, 476 (Va. 2016) (citing 4 William Holdsworth, *A History of English Law* 91 n.6 (1924)). But a motive-driven preemption rule would constrain state legislators in their deliberations. They would have the incentive to minimize public debate and to resort to secrecy and subterfuge, rather than risk stepping into federal territory by offering even tentative federal-field-related justifications for a proposed law.

Under the Atomic Energy Act specifically, the States would be highly constrained in regulating even those nuclear power-adjacent areas that Congress left to their judgment. It is extremely difficult to separate permissible motives—like environmental and economic concerns—from radiological safety issues. *See Entergy Nuclear Vermont Yankee, LLC v. Shumlin*, 733 F.3d 393, 437 (2d Cir. 2013) (Carney, J., concurring) ("[I]it seems impossible to divorce safety concerns from any State legislature's consideration of whether to allow, or continue to allow, the generation of nuclear power within its borders."). The infringement on deliberative freedom about even these traditional areas of state regulation intrudes upon core state prerogatives.

Then there are the severe practical burdens of responding to the judicial inquiry. In petitioners' vision, federal courts would have to charge forth,

ordering depositions of state legislators so that attorneys may perform the exact "questioning" that Speech and Debate Clauses preclude. Any responsible method of aggregating individual motives into a collective legislative intention would have to involve testimony from at least a substantial number of the legislators who voted for the law in question; it would need testimony from the governor who signed the law; perhaps it would need testimony from those who voted against the law, and from staffers, lobbyists, and commentators to provide context and give their own perceptions of what legislators' real motives were. Then, once all of those depositions are finished, if there is no picture clear enough for summary judgment, the same lawmakers would be haled into court to testify at trial—and be subject to cross-examination—about their subjective psychological motivations. One can imagine few more intrusive ways for federal courts to burden the daily operations of sovereign States.

And, it bears repeating, the entire invasive inquiry may well be for naught. After reviewing all of that testimony, documents from the time, lawmakers' public and private statements, and the views of commentators, staffers, and lobbyists, the court may *still* be unable to discern *any* unified motive behind the law, never mind a forbidden one. There is no reason to burden state sovereignty in this way when legislative motive is irrelevant to the Supremacy Clause analysis that suffices in every other area, when the inquiry is extremely unlikely to be enlightening, and—last but not least—when Congress still retains ample authority "to rethink the division of regulatory authority in light of its possible exercise by the States to undercut a federal objective." *Pacific Gas*, 461 U.S. at 223.

III. Neither The Atomic Energy Act Nor This Court's Cases Require A Motive Inquiry

Against all of that background about the peculiarity of, and the problems raised by, legislative-motive inquiries, neither the Atomic Energy Act nor this Court's cases applying it provide a reason to embark on one. As the Commonwealth's brief persuasively explains, 42 U.S.C. § 2021(k) does not preempt anything; § 2021 generally does not define the preempted field by reference to the purposes of state laws; and *Pacific Gas* and its progeny feature, at most, an effects-based preemption test along with dicta about state purposes and rationales. *See* Resp. Br. 21-33.

But even if the Court were to conclude otherwise, the phrase "for purposes other than protection against radiation hazards" in § 2021(k) should not be interpreted as requiring an inquiry into the *subjective* motivations of state legislators. Rather, "purposes" refers to the objective legislative purposes of the statute—an inquiry that courts are far better equipped to address than the fact-intensive motive inquiry petitioners would impose.

To the extent the Court concludes that subjective legislative motives *are* relevant, it should not preempt state laws unless the evidence demonstrates that the State lacked any non-safety rationale for its action.

A. *Pacific Gas* Performs, at Most, an Objective Purpose Inquiry

As noted above, *supra* Part I.B, the more recent "purpose" inquiries this Court has undertaken have been limited to the same universe of materials—and the same modes of analysis—that the Court uses in statutory interpretation. *See McCreary Cty.*, 545 U.S. at 861-62 ("The eyes that look to purpose belong to an 'objective observer,' one who takes account of the

traditional external signs that show up in the text, legislative history, and implementation of the statute,' or comparable official act."); *Board of Educ. v. Mergens*, 496 U.S. 226, 249 (1990) (plurality opinion) ("[W]hat is relevant is the legislative *purpose* of the statute, not the possibly religious *motives* of the legislators who enacted the law."). This is what Justice Scalia and others have articulated as an "objective purpose" inquiry. *Edwards*, 482 U.S. at 636 (Scalia, J., dissenting); Fallon, 130 Harv. L. Rev. at 541.

In this approach, as in statutory interpretation, "[t]he best evidence of [congressional] purpose is the statutory text." *West Virginia Univ. Hosps., Inc. v. Casey*, 499 U.S. 83, 98 (1991). As in statutory interpretation, courts may stop at the plain language and effects of the statutory text if the purpose and meaning of the law are clear. *See, e.g., United States v. Gonzales*, 520 U.S. 1, 6 (1997) ("Given the straightforward statutory command, there is no reason to resort to legislative history."). The inquiry does not demand discovery or taking evidence. And no litigant can "concede" the purpose of a statute; it is up to courts to discern purpose through their usual interpretive tools. *See Orloff v. Willoughby*, 345 U.S. 83, 87-88 (1953) (concessions on question of law do not bind courts).

If *Pacific Gas* did indeed consider statutory "purpose" as well as effects, that consideration was limited to objective purpose. The Court used the statutory text, the law's effects, and a committee report to determine that California had a valid economic purpose. Conspicuously absent was any deep-dive into the California legislature's subjective motivations. Indeed, the Court affirmatively eschewed the invitation to "become embroiled in attempting to ascertain California's true

motive." *Pacific Gas*, 461 U.S. at 216. Even assuming *Pacific Gas* considered purpose, it did not contemplate the subjective motive inquiry that petitioners demand.

B. Any Purpose or Motive Inquiry Should Be Closely Circumscribed

By carefully parsing this Court's decisions in *Pacific Gas* and *English*, the Commonwealth has shown that neither requires consideration of subjective motivation in this context. To the extent the Court reads those decisions differently, any motive-based inquiry must stop at the discovery of a permissible motive. This is the traditional, limited approach to legislative intent—which has prevailed throughout most of our nation's history—in which courts "typically refuse[] to impute impermissible purposes to a statute unless the available indicia effectively rule[] out any other conceivable explanation." Caleb Nelson, *Judicial Review of Legislative Purpose*, 83 N.Y.U. L. Rev. 1784, 1836 (2008); *see, e.g.*, *Shaw*, 509 U.S. at 642 (striking down a peculiarly shaped legislative district that was "so extremely irregular on its face that it rationally c[ould] be viewed only as an effort to segregate the races for purposes of voting"). It is also what the Court did in *Pacific Gas*.

Two principles mark the right path. First, there is no preemption unless nuclear safety is the *sole* motivation behind the state regulation. Second, courts must accept a State's proffered rationale unless it is implausible. In *Pacific Gas*, the Court considered "whether there is *a* nonsafety rationale" for the ban on nuclear construction. 461 U.S. at 213 (emphasis added). The Court "accept[ed] California's avowed economic purpose as the rationale for" its law. *Id.* at 216. And then, crucially, the Court's inquiry stopped.

Against the power company's cries for further investigation of California's legislative history and historical context, the Court explained that the venture would be "pointless" in light of the State's ability to reenact the same law for different reasons. *Id.*

A motive inquiry that follows these principles, though still inadvisable and unnecessary, avoids some of the toughest conceptual, practical, and federalism problems raised by a more searching review of legislators' mental processes. To survive a motion to dismiss under this standard, the complaint here must have alleged that Virginia lacked *any* non-safety rationale for its ban on uranium mining. Petitioners did not (and could not) so allege.

CONCLUSION

The judgment of the court of appeals should be affirmed.

Respectfully submitted,

DEREK T. HO
Counsel of Record
JULIUS P. TARANTO
MICHAEL S. QIN
KELLOGG, HANSEN, TODD,
FIGEL & FREDERICK,
P.L.L.C.
1615 M Street, N.W.
Suite 400
Washington, D.C. 20036
(202) 326-7900
(dho@kellogghansen.com)

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IN THE

Supreme Court of the United States

VIRGINIA URANIUM, INC., *et al.*,

Petitioners,

v.

JOHN WARREN, *et al.*,

Respondents.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT

BRIEF *AMICI CURIAE* OF THE ROANOKE RIVER BASIN ASSOCIATION, DAN RIVER BASIN ASSOCIATION AND PIEDMONT ENVIRONMENTAL COUNCIL IN SUPPORT OF RESPONDENTS

MARK SABATH
WILLIAM C. CLEVELAND
SOUTHERN ENVIRONMENTAL LAW CENTER
201 West Main Street, Suite 14
Charlottesville, VA 22902
(434) 977-4090

SEAN H. DONAHUE
Counsel of Record
DAVID T. GOLDBERG
MATTHEW LITTLETON
DONAHUE, GOLDBERG, & WEAVER, LLP
1111 14th Street, NW, Suite 510A
Washington, DC 20005
(202) 277-7085
sean@donahuegoldberg.com

Counsel for Amici Curiae

283083

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Va. Dep't of Mines, Minerals & Energy, *Historic Mining in Virginia* (2015), http://www.dmme.virginia.gov/dmm/historicmining.shtml 19

INTEREST OF AMICI CURIAE[1]

Amici Roanoke River Basin Association, Dan River Basin Association, and Piedmont Environmental Council are 501(c)(3) nonprofit organizations dedicated to preserving and enhancing the resources of the areas they protect. Headwaters of the Roanoke River and the Dan River flow through the Coles Hill site in Pittsylvania County, Virginia, where petitioners propose to mine uranium. Amici have a strong interest in the ability of the Commonwealth of Virginia, in its sovereign capacity, to protect the environmental integrity and economic diversity of their region.

The Roanoke River flows 410 miles from the foothills of the Blue Ridge Mountains to the Albemarle Sound in North Carolina. The Roanoke River Basin economy depends on recreation and tourism, hydropower generation, commercial fishing, manufacturing, and agricultural production. Established in 1945, amicus Roanoke River Basin Association promotes those interests by representing local governments; regional governmental entities; nonprofit, civic, and community organizations; businesses; and individuals throughout the basin.

The Dan River stretches 214 miles from the eastern slope of the Blue Ridge to the Kerr Reservoir in southern Virginia, where it meets the Roanoke

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[1] The parties have filed letters with the Clerk indicating blanket consent to the filing of amicus briefs. No counsel for any party authored this brief in whole or in part, and no person or entity other than above-named amici curiae and their counsel made a monetary contribution intended to fund its preparation or submission.

River. Since 2002, amicus Dan River Basin Association has protected and promoted the natural and cultural resources of the Dan River Basin through education, stewardship of natural resources, and promoting outdoor recreation and tourism.

Amicus Piedmont Environmental Council was founded in 1972 to promote and protect the rural economy, natural resources, history, and beauty of the Piedmont region of central Virginia. The organization works directly with the citizens of nine counties in the northern Piedmont, and partners with local organizations to support thriving communities and healthy natural resources in areas throughout Virginia. In the early 1980s, based on its study of the potential impacts of uranium mining in Virginia, the Piedmont Environmental Council urged the adoption of a statewide moratorium, and has continued to educate state legislators, local governments, and communities on the issue since that time.

INTRODUCTION AND SUMMARY OF ARGUMENT

Petitioners attempt to make this case about assertedly ulterior motives of the Virginia legislators who, 35 years ago, enacted a moratorium on the mining of uranium within the Commonwealth, 1982 Va. Acts 426 (Pet. App. 170a–177a); *see* Va. Code § 45.1-283 (Pet. App. 176a); 1983 Va. Acts 3, art. 1, codified at Va. Code § 45.1-283 (Pet. App. 177a–178a)—and the post-enactment motives of succeeding legislators, working group members, and private citizens. But *Congress's* intentions, as reflected in the text and structure of the Atomic Energy Act, 42 U.S.C. §§ 2011 *et seq.* (AEA or Act), should dispose of the case. The AEA's text, structure and history make

clear that it does not preempt Virginia's statutory moratorium.

Mining on private land is a traditional area of state regulation, bearing on fundamental choices about the sometimes incompatible uses to which land can be put and implicating States' core responsibilities to protect residents' health and the local environment. Because mining on private land is an issue that has been traditionally subject to state regulation (indeed, for most of the country's history, exclusively so), petitioners must show that preemption of state law was Congress's "clear and manifest purpose." *Wyeth v. Levine*, 555 U.S. 555, 565 (2009).

Petitioners are unable to identify any statutory text that plausibly supports their preemption theory, and the statutory text that exists refutes it. While the Act sets forth a comprehensive regime of federal regulation of processing, transport, use, and disposal of nuclear material, that regime begins only "*after [the material's] removal* from its place of deposit in nature." 42 U.S.C § 2092. Indeed, even the original version of the AEA, which contemplated a federal monopoly over nuclear development, did not regulate uranium mining on nonfederal land or purport to limit state authority over that activity.

Congress's choice to leave regulation of uranium mining in state hands does not frustrate the development of nuclear power. The AEA enables the federal government to ensure development of uranium ore or other source materials on federal and nonfederal land. The Nuclear Regulatory Commission (NRC) has express authority under the statute, "to the extent it deems necessary to effectuate the

provisions of this [Act]," to issue "permits for prospecting for, exploration for, mining of, or removal of deposits of source material in lands belonging to the United States, *id.* § 2097, and is given broad authority—again, when the Commission "deems" it necessary to effectuate the Act—"to purchase, condemn, or otherwise acquire any interest in real property containing deposits of source material," *id.* § 2096(b). Thus the Act, as written by Congress, ensures that its purposes may be effectuated without preempting the States' role— and without judicial intervention.

No language in the Act qualifies States' authority to regulate uranium mining, or limits the purposes for which they may do so. Petitioners misplace reliance upon a provision that affirms state authority to regulate "activities" under NRC oversight, so long as the States regulate "for purposes other than protection against radiation hazards." 42 U.S.C. § 2021(k). That provision merely confirms States' ability to regulate "activities" regulated by the NRC, while preserving federal control over radiological safety matters. It does not speak to uranium mining on private land, which has never been regulated under the AEA.

And none of this Court's AEA cases supports limiting state authority to regulate or ban uranium mining, a matter that has always been beyond the AEA's reach. The rule petitioners seek would not only scramble the AEA's carefully drawn jurisdictional lines; it would also place uranium mining—a particularly harmful and disruptive land use—outside the direct regulatory authority of both state *and* federal government.

Virginia and other States reasonably have chosen to closely regulate or prohibit uranium mining in light of its significant impacts on local resources and communities. Congress clearly left that choice to the States, consistent with our constitutional system of federalism.

BACKGROUND

A. Pittsylvania County

The gently rolling hills of Pittsylvania County, Virginia—the site of petitioners' proposed uranium mine—are home to more than 60,000 people. Six miles from the Coles Hill site, Chatham, the county seat, is home to a noteworthy historic district and two boarding schools.



Figure 1. Pittsylvania County (2011)

Residents rely heavily on the county's natural resources for their health and livelihood. Agriculture is a leading economic sector, with more than 1,300

active farms producing crops, livestock, poultry, and dairy products.[2] Nearly three-quarters of residents rely on private wells for their drinking water.[3]

Pittsylvania County is also the heart of the Roanoke River watershed, which supplies drinking water for the coastal cities of Norfolk, Virginia Beach, and Chesapeake, Virginia.[4] The Commonwealth has designated over 50 miles of the Roanoke River immediately east of Pittsylvania County as a State Scenic River, in recognition of its natural beauty and recreational and historic significance. Va. Code §§ 10.1-418, 10.1-401(A)(1). The County's rivers, lakes, and streams also support hunting, fishing, and water sports as both popular recreational activities and generators of tourism revenue.

Pittsylvania County has a humid subtropical climate,[5] with annual precipitation averaging more

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[2] U.S. Dep't of Agric., 2012 Census of Agriculture, County Profile: Pittsylvania County, Virginia (May 2014), http://www.agcensus.usda.gov/Publications/2012/Online_Resources/County_Profiles/Virginia/cp51143.pdf.

[3] U.S. Geological Survey, Water Use Data for Virginia (June 2018), http://tinyurl.com/ybyl28kc (estimating county's 2015 population as 62,194), http://tinyurl.com/y7l7nxhx (estimating that, as of 2015, public water supply served 16,789 residents).

[4] City of Virginia Beach, Policy Report: Uranium Mining in the Roanoke River Basin 2 (2008), http://www.vbgov.com/government/departments/public-utilities/Documents/14.VABeach_Uranium_Mining_Policy_Report.pdf.

[5] Nat'l Research Council, Uranium Mining in Virginia: Scientific, Technical, Environmental, Human Health and Safety, and Regulatory Aspects of Uranium Mining and Processing in Virginia 40 (2012) ("NAS Report"), http://doi.org/10.17226/13266. This peer-reviewed report by the National Academy of Sciences ("NAS") was the culmination of a

than 43 inches per year.[6] Virginia is also subject to seismic activity and to extreme weather events, including tornadoes,[7] hurricanes, tropical storms, and heavy rainfall.[8]

B. Uranium Mining

There are two conventional methods for removing uranium from the ground: open-pit mining and underground mining. Both methods have been used in the arid western United States,[9] where the climate and population density differ significantly from that of Virginia. No open-pit or underground uranium mines are currently operating anywhere in the United States.[10]

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multi-year examination of "the scientific, technical, environmental, human health and safety, and regulatory aspects of uranium mining, milling, and processing as they relate to the Commonwealth of Virginia . . . ." *Id.* at 32.

[6] Southeast Reg'l Climate Ctr., *Chatham, Virginia (441614): Period of Record Monthly Climate Summary* (2012), http://www.sercc.com/cgi-bin/sercc/cliMAIN.pl?va1614.

[7] Va. Dep't of Emergency Mgmt., History: Virginia Tornadoes (updated Aug. 2016), http://www.vaemergency.gov/news-local/tornado-history.

[8] NAS Report at 40-41. In August 2011, a 5.8-magnitude earthquake struck Virginia, with its epicenter near Mineral, Virginia, roughly 125 miles from the proposed site. *Id.* at 40.

[9] 5 Special Waste Branch, U.S. Envtl. Prot. Agency, EPA 530-R-94-032, Technical Resource Document, Extraction and Beneficiation of Ores and Minerals 4 (Jan. 1995) ("EPA Technical Resource Document"), http://archive.epa.gov/epawaste/nonhaz/industrial/special/web/pdf/uranium.pdf.

[10] U.S. Energy Info. Admin., 2017 Domestic Uranium Production Report 10 tbl. 2 (May 2018) ("2017 Domestic Uranium Production"), http://www.eia.gov/uranium/production/

In open pit mining, topsoil and rock overburden are removed from the site using explosives or bulldozers, mechanical shovels, and other heavy equipment. EPA Technical Resource Document, *supra* note 9, at 16. The exposed uranium ore is then removed and trucked to an on-site stockpile. *Id.* Non-ore bearing material and overburden are discarded in waste rock piles on-site. *Id.*[11]

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annual/pdf/dupr.pdf. There are six mines currently in operation in the United States that extract uranium using a process known as in situ leaching. *Id.* Petitioners do not deny that this process is infeasible in Virginia. *See* Pet. App. 22a n.2 (Traxler, J., dissenting).

[11] Waste rock is rock or ore that has been mined but is not of sufficient value to warrant milling. 1 Radiation Prot. Div., U.S. Envtl. Prot. Agency, EPA 402-R-08-005, Technical Report on Technologically Enhanced Naturally Occurring Radioactive Materials from Uranium Mining 1-4 n.5 (Apr. 2008) ("TENORM Report"), http://www.epa.gov/sites/production/files/2015-05/documents/402-r-08-005-v1.pdf.



Figure 2. Open-pit uranium mine, Northern Territory, Australia (1990)

In underground mining, the operator sinks a shaft near the ore body and develops tunnels from the shaft at various depths to access and remove the ore. EPA Technical Resource Document, *supra* note 9, at 16. After explosives are detonated to fragment the ore body, ore and waste rock are removed through shaft conveyances or chutes and hoisted to the surface, with the waste rock again discarded on-site. *See id.* at 16-17; NAS Report, *supra* note 5, at 106.

Once extracted, uranium ore is transferred to a mill, where it undergoes a series of physical and chemical processes that separate the ore from the rock and convert the ore into concentrated uranium oxide, or "yellowcake." *See* EPA Technical Resource Document, *supra* note 9, at 4, 17. Wastes from the milling process, known as "tailings," are pumped in slurry form to on-site impoundments. *Id.* at 23.

Because the uranium content of the raw ore is typically only a fraction of one percent,[12] the mining process produces an extremely high volume of waste material—material that is both radioactive and chemically reactive. *See* TENORM Report, *supra* note 11, at 2-7; NAS Report, *supra* note 5, at 192. Water that collects in mine workings must also be pumped out—a process known as "dewatering"—and then may be treated and discharged directly into surface waters. EPA Technical Resource Document, *supra* note 9, at 33-34.

C. Effects of Uranium Mining on Human Health and the Environment

Independent of the radiological safety concerns associated with uranium milling and tailings management—which occur *after* the extraction of uranium ore from the ground—the mining process presents its own set of serious risks to human health and the environment, due to the presence of radiological and non-radiological chemicals in ore deposits, mine water, and waste rock. *See* NAS Report, *supra* note 5, at 205, 209-10.

1. Human Health Effects

The most notorious health effects of uranium mining itself are associated with its radiological character. Numerous studies of uranium miners have found significant increases in the occurrence of respiratory tract cancer, predominantly lung cancer, due to high levels of radon and radon decay products

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[12] Worldwide, most uranium deposits have a uranium concentration of 0.05 to 0.5 percent. NAS Report at 111.

in underground uranium mines.[13] Members of the public living in the vicinity of uranium mines are also at increased risk of radiation exposure from atmospheric deposition of fugitive ore dust, ventilation of toxic exhaust from underground mine shafts, contamination of water supplies, and uncontrolled releases of radioactive materials as a result of extreme events such as floods and earthquakes. *See* NAS Report, *supra* note 5, at 176; EPA Technical Resource Document, *supra* note 9, at 43.

The human health risks from uranium mining are not traceable to radioactivity alone. Mine workers face increased rates of lung cancer and other respiratory disorders due to inhalation of silica dust and diesel emissions from mining operations. NAS Report, *supra* note 5, at 156-57, 162-64. Particulate matter generated from the disturbance of rock and soil, bulldozing, blasting, and vehicular travel can lead to higher rates of asthma in the surrounding community. *Id.* at 202-03.

2. Environmental Effects

a. Surface water quality and quantity. Mining activities—disturbance of land, temporary storage of ores and mining wastes, dewatering of mine workings, and reclamation activities—all have the potential to significantly increase the concentrations

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[13] Agency for Toxic Substances & Disease Registry, Toxicological Profile for Uranium 17 (Feb. 2013), http://www.atsdr.cdc.gov/toxprofiles/tp150.pdf; *see also Begay v. United States*, 591 F. Supp. 991, 1006 (D. Ariz. 1984) (finding direct relationship between underground uranium miners' radiation exposure and heightened incidence of respiratory tract and lung cancer).

and loads of substances in surface water that impair water quality, including phosphorus, nitrate, metals, metalloids, sediment, and strong acidity. NAS Report, *supra* note 5, at 181, 193. In particular, a process known as acid mine drainage—caused when water flows over or through sulfur-bearing ore—produces an acidic solution containing toxic heavy metals, which can then run off into surface waters. *See id.* at 181-84; *id.* at 181 (problems with acid mine drainage "are nearly ubiquitous . . . for uranium mines around the world").

Mining also affects the *quantity* of surface water in various ways. Compared to unmined, forested land, areas disturbed by surface mining experience increased surface runoff on-site, which increases stream discharges in downstream waters. NAS Report, *supra* note 5, at 194. Underground mining can increase flows to downstream waters (due to discharge from dewatering) or decrease on-site flows (due to blasting of rock). *Id.*

b. Groundwater quality and quantity. By artificially introducing oxygen into the subsurface and connecting separate aquifers, underground exploration and mining can form acid mine drainage and enhance the solubility and mobility of contaminants in groundwater. NAS Report, *supra* note 5, at 196-97. Lowering the water table to access ore bodies lying beneath the water table can also lower groundwater levels in surrounding wells, potentially causing them to run dry and forcing affected households to find alternate sources of water. *Id.* at 199.

c. Soil and ecological effects. Activities associated with mining generally—including ground

disturbance, emissions from vehicles and construction equipment, and increased human presence—have a number of detrimental effects on the surrounding environment. The removal of soil and overburden causes the loss of porosity and permeability, decreases moisture for plant growth, accelerates erosion, and leads to the loss of organisms, organic matter, and nitrogen vital to healthy soils. NAS Report, *supra* note 5, at 201. The elimination of soil habitat and woodlands, in turn, has long-term ecological effects. *See id.* at 214. And the presence of chemicals in uranium mine water and waste that are toxic to animal and plant life—including dissolved salts, acidity, selenium, copper, aluminum, vanadium, and iron—means that uranium mining poses ecological risks beyond typical mining operations. *See id.* at 205, 209-10, 211-12.

Modern safety practices can reduce, but do not eliminate, the environmental hazards historically associated with uranium mines. Even state-of-the-art uranium mines have experienced acid mine drainage from waste rock piles and adverse effects on aquatic biota from contaminants in treated effluent. *Id.* at 221.

D. Economic Effects of Dependence on Uranium Mining

Pittsylvania County's economy relies on a variety of relatively stable industries, including agriculture, manufacturing, health care, and education.[14] In

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[14] Terance J. Rephann et al., *Growing Agribusiness: The Contribution and Development Potential of Agriculture and Forest Industry in the Danville Metropolitan Area* 8-9 (Feb.

contrast, mineral commodity markets tend to be cyclical, and the market for uranium is particularly susceptible to booms and busts. Uranium prices skyrocketed in the 1970s, plummeted in the 1980s and 1990s, then rebounded in the mid-2000s, only to decline steeply again. *See* NAS Report, *supra* note 5, at 93 fig. 3.22. Domestic production peaked in 1980 at nearly 44 million pounds of uranium concentrate, before falling to just over 3 million pounds in 1993.[15] With the price of uranium concentrate remaining low, domestic uranium production sits at 1.2 million pounds today. 2017 Domestic Uranium Production, *supra* note 10, at 16 tbl. 9. Given this instability, uranium mining may do more harm than good for a local economy.

ARGUMENT

"[T]he purpose of Congress is the ultimate touchstone in every pre-emption case." *Hughes v. Talen Energy Mktg., LLC*, 136 S. Ct. 1288, 1297 (2016) (citation and quotation marks omitted). In such a case, the Court asks whether "Congress, in enacting the Federal Statute, intend[ed] to exercise its constitutionally delegated authority to set aside the laws of a State[.]" *Barnett Bank of Marion Cty., N.A. v. Nelson*, 517 U.S. 25, 30 (1996).

Like limits on uranium mining that other States have imposed, Virginia's moratorium reflects the Commonwealth's reasonable judgment that uranium

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2013), http://ceps.coopercenter.org/sites/ceps/files/PittDanville_agbusiness_final.pdf.

[15] U.S. Energy Info. Admin., Annual Energy Review 2011, at 275 (Sept. 2012), http://www.eia.gov/totalenergy/data/annual/pdf/aer.pdf.

mining could harm the "health, safety, and general welfare" of its residents, Act of Apr. 7, 1982, ch. 269, 1982 Va. Acts 426 (Pet. App. 170a), and could impair the state and regional economy. That is a judgment Congress, in the AEA, plainly left to Virginia to make.

Because mining on private land is a matter of traditional police power and land-use regulation, only a clear signal from Congress could displace state power in this area. The AEA not only lacks a clear signal that Congress preempted state uranium mining prohibitions; it clearly and manifestly leaves such decisions to the States. AEA regulation commences only "after" source material's *"removal* from its place of deposit in nature," 42 U.S.C § 2092 (emphasis added), and when that place of deposit is private land, eminent domain is the sole means by which the resource may be brought within the ambit of the AEA.

The AEA does not cabin the States' discretion in exercising their traditional land use authority, and it provides no warrant for federal courts to second-guess the motivations of States exercising that authority.

I. State Regulation of Uranium Mining on Private Land Is a Quintessential Exercise of Police Power That Cannot Be Preempted Absent Clear and Manifest Congressional Intent

When Congress legislates in a field "traditionally occupied" by States, courts assume that the "historic police powers of the States [are not] superseded . . . unless that was the clear and manifest purpose of Congress." *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 230 (1947); *see Wyeth*, 555 U.S. at 565. Because

mining on private land is an "area[] of traditional state regulation," *Bates v. Dow Agrosciences LLC*, 544 U.S. 431, 449 (2005); *see City of Columbus v. Ours Garage & Wrecker Serv., Inc.*, 536 U.S. 424, 432-33 (2002); *Medtronic, Inc. v. Lohr*, 518 U.S. 470, 485 (1996), and given the undisputed absence here of an express preemption clause, *cf. Puerto Rico v. Franklin Cal. Tax-Free Trust*, 136 S. Ct. 1938, 1946 (2016), the presumption against preemption of "traditional" state authority over local land use applies with full force. Mining on private land implicates core police power concerns for public health, environmental quality, and aesthetics. That is certainly true of uranium mining, which poses both radiological and non-radiological risks for nearby residents and water supplies, and harms natural resources and aesthetic values. *See* pp. 10-13, *supra*.

Regulation of mining on private land lies at the core of a State's police powers, implicating "the public interest in health, the environment, and the fiscal integrity of the area[] under its jurisdiction]." *Keystone Bituminous Coal Ass'n v. DeBenedictis*, 480 U.S. 470, 488 (1987). It is a form of regulation of local land use, "perhaps the quintessential state activity," *FERC v. Mississippi*, 456 U.S. 742, 768 n.30 (1982); *see Hess v. Port Auth. Trans-Hudson Corp.*, 513 U.S. 30, 44 (1994); *Warth v. Seldin*, 422 U.S. 490, 508 n.18 (1975). *See also Solid Waste Agency of N. Cook Cty. v. U.S. Army Corps of Eng'rs*, 531 U.S. 159, 172-73 (2001) (construing federal statute to avoid interpretation that would raise constitutional questions because of intrusion on States' traditional authority over local land use).

Until well into the twentieth century, mining activity on private land was generally regarded as beyond Congress's constitutional power to regulate. *See Carter v. Carter Coal Co.*, 298 U.S. 238, 304 (1936) ("Mining brings the subject-matter of commerce into existence. Commerce disposes of it."); *United Mine Workers of Am. v. Coronado Coal Co.*, 259 U.S. 344, 407 (1922) ("Coal mining is not interstate commerce, and the power of Congress does not extend to its regulation as such."); *Kidd v. Pearson*, 128 U.S. 1, 21 (1888) (including "mining" among the "interests which in their nature are, and must be, local in all the details of their successful management").

In eastern States, federal land is relatively scarce, and state common and statutory laws have long governed all aspects of mining. "The individual states comprised within this group, being the paramount proprietors of their mineral lands, could alone prescribe the terms upon which mining rights could be acquired thereon." 1 Curtis H. Lindley, *The American Law Relating to Mines and Mineral Lands* § 19 (3d ed. 1914).[16]

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[16] The understanding that States had broad police power concerning mining informed the law applicable to mining on the vast quantities of public land in western states. *See Woodruff v. N. Bloomfield Gravel Mining Co.*, 18 F. 753, 806-09 (C.C.D. Cal. 1884) (enjoining as nuisance the practice of hydraulic mining); *Hicks v. Bell*, 3 Cal. 219, 227 (Cal. 1853). Even when addressing mining on federal land, Congress has preserved an important role for state and local regulation. *See* 30 U.S.C. § 22 (General Mining Law provision requiring compliance with all state and local laws "not inconsistent with" federal law); *Cal. Coastal Comm'n v. Granite Rock Co.*, 480 U.S. 572, 581-82, 587 (1987); *United States v. Shumway*, 199 F.3d 1093, 1097-98 (9th Cir. 1999).

American mining law was in large part developed in common law adjudication,[17] but state legislatures and administrative agencies also played important roles, "[p]articularly [in] those [places] where coal mining is carried on extensively." Lindley § 19. More than a century ago, those States had developed "elaborate systems in the nature of police regulations, prescribing the manner in which mines shall be worked, providing for their official inspection, proper ventilation, means of escape in case of accident, and provisions looking to the protection of the miners." *Id.*

Although Virginia was not a pioneer in mining legislation, *see* Lindley § 19, the Commonwealth adopted its first general legislation on mining more than fifty years ago. From 1966 to 1979, Virginia issued permits for coal mines under its own laws. Va. Code §§ 45.162 to -179 (1966); *id.* §§ 45.198 to -220.5 (1972). In 1979, Virginia assumed primary responsibility for the implementation of the Surface Mining Control and Reclamation Act of 1977 (SMCRA), 30 U.S.C. §§ 1201 *et seq.*, at all coal mines

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[17] *See, e.g., Brush v. Lehigh Valley Coal Co.*, 138 A. 860, 862 (Pa. 1927) (finding that contractual release precluded plaintiff's otherwise viable tort claim for pollution of stream); *Continental Coal Co. v. Connellsville By-Product Coal Co.*, 138 S.E. 737 (W. Va. 1927) (reversing injunction against operation of mine alleged to interfere with operation or safety of adjacent mine); *Mahon v. Pa. Coal Co.*, 118 A. 491, 494 (Pa. 1922) (discussing Pennsylvania common law principles governing mining, including rules regarding lateral support of adjacent land), rev'd on other grounds, 260 U.S. 393 (1922); *Keppel v. Lehigh Coal & Navigation Co.*, 50 A. 302, 303 (Pa. 1901) (upholding nuisance judgment against owner of coal mine that polluted stream, impairing operation of flour mill). *See also Kellyville Coal Co. v. Strine*, 75 N.E. 375, 379 (Ill. 1905) (interpreting provision of state constitution addressed to mine safety).

within its borders. Virginia Coal Surface Mining and Reclamation Act, 1979 Va. Acts ch. 290, codified at Va. Code §§ 45.1-226 to -270. The Commonwealth currently regulates coal and mineral mining (the latter of which is not subject to SMCRA) pursuant to Va. Code § 45.1-161.1 *et seq.*

Although Virginia is under no special obligation to explain its decision to ban uranium mining while permitting (subject to regulation) other forms of mining, there is nothing anomalous about its approach. Iron and coal mining in Virginia predate the Republic—bog iron ore was mined near Jamestown in the 1600s, and mining of the Richmond coalfield began in the 1700s.[18] This lengthy history, beginning long before the environmental and health effects of mining were widely understood, shaped patterns of settlement, economic activity, and public and private investment that are now centuries old. In contrast, uranium mining has never occurred in Virginia, has been prohibited by law for 36 years, and is proposed to occur in an area whose economy developed, and remains organized around, very different land and resource uses.

Regulation of industrial production is, of course, no longer considered beyond Congress's power. *See NLRB v. Jones & Laughlin Steel Corp.*, 301 U.S. 1 (1937); *Hodel v. Va. Surface Mining & Reclamation Ass'n*, 452 U.S. 264 (1981). But even when it has exercised its powers under a broadened reading of the Commerce Clause, Congress has in key respects

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[18] Va. Dep't of Mines, Minerals & Energy, *Historic Mining in Virginia* (2015), http://www.dmme.virginia.gov/dmm/historicmining.shtml.

affirmed States' traditional, far-reaching authority over mining. In enacting SMCRA, "a nationwide program to protect society and the environment from the adverse effects of surface coal mining operations," 30 U.S.C. § 1202(a), Congress expressly preserved States' authority to adopt "more stringent land use controls and regulations of surface coal mining and reclamation," *id.* § 1255(b).

II. The AEA Does Not Regulate Conventional Uranium Mining on Nonfederal Land or Displace Traditional State Authority Over Such Mining

The AEA itself disposes of petitioners' preemption claim. Petitioners have no plausible textual basis for their claim that state regulation of uranium mining is preempted—and the statutory text and structure powerfully refute the argument that Congress *implicitly* preempted state regulation. Instead, Congress deliberately chose to leave the regulation of uranium mining on nonfederal land entirely to state and local authorities, granting the NRC non-regulatory (and non-preemptive) powers to ensure an adequate supply of source materials where the NRC deems it necessary to effectuate the AEA's purposes—which it has not done here.

The AEA's text, structure, and history indicate a deliberate congressional choice, unchanged since the statute was enacted in 1946, to leave to States their traditional authority over all aspects of mining on nonfederal land. Honoring this choice requires rejecting petitioners' creative efforts to find some theory by which preemption could be justified despite (1) the lack of any supporting statutory text, and (2)

pointed indices that Congress affirmatively left the matter to state control and found other means of ensuring sufficient quantities of source material to effectuate the Act's purposes

The AEA gives the NRC "exclusive jurisdiction to license the transfer, delivery, receipt, acquisition, possession and use of nuclear materials." *Pacific Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 207 (1983) (*Pacific Gas*). The NRC is directed to administer an exclusive regime of licensing and regulatory oversight for the safe handling and disposal of nuclear materials. But the AEA's extensive scheme of federal regulation of nuclear materials applies only to activities occurring *"after"* the material's *"removal* from its place of deposit in nature." 42 U.S.C § 2092 (emphasis added).[19]

Congress chose not to apply the AEA's regime of federal standard-setting and licensing to mining uranium on nonfederal land. The decision to respect States' traditional authority was no accidental oversight: Mining is expressly addressed under the AEA, in a provision giving the Commission authority to issue permits for mining of source material in "lands belonging to the United States." 42 U.S.C. § 2097. The AEA also provides the NRC with non-regulatory means to obtain supplies of uranium and other nuclear source materials still "deposit[ed] in nature" on non-federal land, namely, through negotiated purchase or condemnation. The statute

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[19] As noted above, *supra* p. 20, even in regulating surface mining of coal in SMCRA, Congress expressly left intact States' authority to enact more stringent environmental protections.

authorizes the Commission, "to the extent it deems necessary to effectuate" the AEA, "to purchase, condemn, or otherwise acquire any interest in real property containing deposits of source material," *id.* § 2097(b), and also to likewise "acquire rights to enter upon any real property deemed by the Commission to have possibilities of containing deposits of source material in order to conduct prospecting and exploratory operations," *id.* § 2097(c). These provisions for exploring and acquiring land containing uranium or other source material reinforce and complement Congress's choice to leave undiminished States' power to regulate uranium mining on nonfederal land.

No provision of the statute authorizes the NRC to regulate—whether by prescribing standards, requiring a license, or otherwise—mining uranium on nonfederal land. Petitioners and the United States concede this point. *See* Pet. Br. 27 (recognizing that the "*mining* of uranium" is "an activity the NRC does not regulate") (emphasis in original); U.S. Br. 14 ("uranium mining . . . is outside [NRC] jurisdiction"); U.S. Cert. Br. 18 (acknowledging that "States retain the authority to regulate conventional uranium mining" or "to prohibit it altogether"); *see also* Pet. App. 12a (court of appeals' reference to the NRC's conclusion that it "lacks the power to regulate" conventional uranium mining on nonfederal land); Resp. Br. 9 (citing longstanding NRC precedent to that effect).

In this carefully crafted, repeatedly amended statute, *see, e.g.*, *English v. Gen. Elec. Co.*, 496 U.S. 72, 81-82 (1990); *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 250-51 (1984), Congress has not included

any language that even arguably preempts state regulation of uranium mining on nonfederal land.

III. Subsection 2021(k) Does Not Operate to Preempt State Regulations Concerning Uranium Mining on Private Land

Lacking any statutory language speaking directly to preemption of state mining regulation, petitioners rely heavily on 42 U.S.C. § 2021(k), to which petitioners impute a powerful, free-floating preemptive force that "controls" this case. Pet. Br. 33.

Subsection 2021(k) cannot bear that interpretation. It is a *non-preemption clause* in a provision designed to return to the States authority over nuclear activities that had previously been a federal monopoly. *See Pacific Gas*, 461 U.S. at 206-09. By its terms, it *preserves* state authority, clarifying that "[n]othing in [Section 2021]" affects States' authority "to regulate activities for purposes other than protection against radiation hazards." 42 U.S.C. § 2021(k). Section 2021 addresses various activities subject to regulation by the Commission, including the "construction or operation" of any "production or utilization facility or any uranium enrichment facility," the export or import of nuclear material; or certain forms of disposal of nuclear materials, 42 U.S.C. § 2021(c). Subsection 2021(k) provides that the Act does not preclude state regulation of *those activities* so long as the State is not regulating for the purpose of protecting against radiation hazards. As this Court explained in *Pacific Gas*, Subsection 2021(k) confirms that Section 2021 was "not intended to cutback on preexisting state authority outside the NRC's jurisdiction," and underscores "the distinction drawn in [the AEA] between the spheres of activity

left respectively to the federal government and the states." 461 U.S. at 209-10.

Neither *Pacific Gas*, nor any other of this Court's AEA preemption decisions, nor its general preemption jurisprudence supports the notion that the Subsection 2021(k) savings clause operates to preempt state laws protecting against radiation hazards of activities that are not and cannot be regulated by the NRC under the AEA. Indeed, state laws that protect against radiation hazards are many and cover a broad sweep, concerning, for example, radon gas contamination of buildings, *e.g.*, 29 Fla. Stat. § 404.056; the inspection of x-ray equipment in medical offices, *e.g.*, Tex. Health & Safety Code Ann. § 401.064; the introduction of radioactive wastes in sewers, *e.g.*, 70 Ill. Comp. Stat. 2405/18(d); and criminal prohibitions on the use of radioactive substances to poison others, *e.g.*, Ohio Rev. Code Ann. § 2927.24. Such laws are manifestly grounded on concerns about radiation, but they are not preempted by the AEA because the distinction Subsection 2021(k) draws between permitted (non-radiation-based) and preempted (radiation-based) state regulation applies only to the universe of "activities" subject to AEA regulation. Uranium mining is not one of those activities.

Subsection 2021(k) does not address activities that the AEA does not regulate. And it surely does not establish a bizarre blinkering requirement, such that, in exercising their sovereign authority to regulate uranium mining on nonfederal land, States may not consider the radiation hazards associated with such mining for workers, local residents, visitors, and

natural resources—or the potential effects of such hazards on the local economy.

IV. Preemption of State Authority Over Nonfederal Uranium Mining Would Open a Harmful Regulatory Void That Congress Manifestly Did Not Intend to Create

Petitioners' proposed preemption regime would have striking and dramatic implications for States (and for public safety), by requiring States to allow uranium mining to take place despite their own contrary judgments about the activity's burdens and benefits—and despite the absence of any federal regime directly regulating that activity's substantial health, environmental, and economic effects. Petitioners' theory places States and their residents in a regulatory limbo, where neither the NRC nor the States themselves have clear authority to protect against radiological hazards associated with uranium mining.

That result is at least as contrary to congressional intent as the one this Court rejected in *Pacific Gas*. In concluding that the AEA did not preempt state public utility regulation of nuclear power generators, the Court there recognized as "almost inconceivable" that Congress "would have left a regulatory vacuum." 461 U.S. at 207-08. Here, as in that case, "the only reasonable inference is that Congress intended the states to continue to make these judgments."[20]

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[20] To be sure, Congress sometimes does choose to preempt state law without providing a substitute federal regulation based on a decision to rely on unfettered market forces. *See Morales v. Trans World Airlines, Inc.*, 504 U.S. 374, 384 (1992). But there

Petitioners' argument would require States confronted with requests to allow uranium mining within their borders to affirmatively license activity against their better judgment or else leave entirely unregulated activity that may have serious adverse implications for public health, the environment, and the local economy. That unpalatable choice is redolent of the requirement, held unconstitutional in *New York v. United States*, 505 U.S. 144 (1992), that a State either regulate according to congressional wishes or "take title" to nuclear waste.

But no such extreme impositions are presented here, because there is no sign Congress intended to put Virginia and other States in that position. Rather, the AEA's clear intent is that States retain their preexisting, plenary authority to regulate (including, where they so choose, to prohibit) mining on nonfederal land within their borders.

V. The Courts Below Properly Rejected Petitioners' Attempt to Void Virginia's *Mining* Statute as an Impermissible Milling Regulation

The Court should reject petitioners' effort to transform Congress's partial preemption of state regulations of *subsequent* phases of the process of nuclear development—those the AEA subjects to federal licensing and oversight—into a different regime, unmoored from the statute, in which plaintiffs may challenge state regulations of mining on nonfederal land. As an initial matter, petitioners provide no persuasive reason to think Virginia was

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is no indication that Congress intended to create such a regime with regard to uranium mining.

not motivated principally by concerns about the impacts of uranium mining itself. *See English*, 496 U.S. at 83 (in case involving state common law claim addressing AEA-regulated activity, looking to relevant common law's "'paramount' purpose") (quoting district court). This Court's AEA precedent cuts strongly against petitioners' demand federal courts plumb for claimed hidden motives behind state regulations in areas Congress has left to state regulation. *See Pacific Gas*, 461 U.S. at 216 (disclaiming an "attempt[] to ascertain California's true motive" for regulating economic aspects of nuclear power plant). The Virginia General Assembly was concerned with what it actually regulated—uranium *mining*—and there is no basis for this Court to conclude otherwise. *See Shady Grove Orthopedic Assocs., P.A. v. Allstate Ins. Co.*, 559 U.S. 393, 403-05 (2010) (urging that state law should be judged "as written" rather than based upon an assessment of the "subjective intentions of the state legislature").

More fundamentally, however, petitioners' argument is incompatible with Congress's decision in the AEA to exclude from the Act's regime of federal regulation uranium mining on nonfederal land. Judicial fact-finding in search of impermissible legislative motives is not only likely to be inefficient and highly uncertain; it also disregards the bright line Congress has clearly and consistently drawn in the AEA between state and federal roles. Congress's decision to leave regulation of mining on nonfederal land to the States should be dispositive of this case. The plain (and sole) object of the Virginia statute at issue here is mining itself. And as set forth above, *see* pp. 10-15, *supra*, given the potential human health, environmental, and economic impacts associated with

the types of uranium mining petitioners seek to pursue, Virginia had ample reason to exercise its authority in this area.

In the absence of clear congressional intent to preempt, totally absent here, courts should not disturb a State's judgment that the considerable impacts of uranium mining are incompatible with diverse and largely agricultural local economies like that of Pittsylvania County. Nor is Virginia's judgment unique among the States. For over thirty years, Maine, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, and Vermont have similarly imposed severe restrictions or outright bans on uranium mining.[21]

Unlike with the activities the Act subjects to NRC regulation, Congress did not prescribe, or invite federal courts or the NRC to police, the reasons why a State regulates uranium mining. If the mining ban here is subject to intrusive scrutiny from a federal court based upon allegations of improper, ulterior motives, then Congress's decision to respect traditional state authority would mean little. Congress readily could have provided that state regulation of mining on nonfederal land is proper only

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[21] Me. Stat. tit. 11, § 489-B (prohibiting mining); N.H. Rev. Stat. Ann. § 125-F:1 (declaring public policy of State to prohibit uranium mining); N.J. Stat. Ann. § 13:1J-3 (prohibiting mining, milling, and processing); N.Y. Envtl. Conserv. Laws Ann. § 22-1070 (prohibiting mining); N.C. Gen. Stat. Ann. § 74-89 (imposing two-year delay on issuance of mining permit from filing of application); 34 Pa. Cons. Stat. § 722(c) (prohibiting uranium mining on Pennsylvania Game Commission land); Vt. Stat. Ann. tit. 10, § 6083(c) (requiring legislative approval prior to agency consideration of application for uranium mining or processing).

for specific purposes; it pointedly did not. Or Congress could have authorized the NRC to declare particular areas or parcels to be outside States' normal and full regulatory powers; it did not. The procedure petitioners propose here is flatly inconsistent with the very federal legislative scheme it purports to enforce.

Petitioners' reliance on *Skull Valley Band Of Goshute Indians v. Nielson*, 376 F.3d 1223 (10th Cir. 2004), is misplaced. The claim in *Skull Valley* involved state action (and federally regulated activity) dramatically different from those here. Utah had adopted a set of coordinated measures designed to obstruct the construction of a waste management facility by banning its construction or attaching onerous conditions, and by imposing special restrictions on the use of instrumentalities of commerce—state roads—to carry nuclear waste to the facility. *Id.* at 1245-54. The Utah planning, licensing, and road access provisions all targeted "the transportation and storage of [spent nuclear fuel]," *id.* at 1245, both AEA-regulated activities. Affirmance in this case does not imply approval of efforts like Utah's, and, should a case like *Skull Valley* arise (and be resolved differently in lower courts), this Court will have ample tools to protect the federal interests involved. There is no need to stretch preemption to an area Congress deliberately did not touch, and create a problematic gap in health and environmental protections, in order to address scenarios like *Skull Valley*.

Nor does *Entergy Nuclear Vermont Yankee, LLC v. Shumlin*, 733 F.3d 393 (2d Cir. 2013), support petitioners' position. That case involved Vermont laws that directly regulated whether a nuclear power

plant could continue to operate—a quintessential AEA-regulated activity. The *Entergy* court concluded that new and different conditions Vermont has imposed on the plant's continued operation were grounded on radiological safety concerns; the court analogized the Vermont statutes to a "'state moratorium' on nuclear energy 'grounded in safety concerns.'" *Id.* at 428 (quoting *Pacific Gas*, 461 U.S. at 213). Regardless of whether the *Entergy* opinion properly interpreted the Vermont laws at issue there (or even correctly applied the AEA to state power plant licensing, *see* 733 F.3d at 435-36 (Carney, J., concurring)), *Entergy* is not fairly comparable to this case, where Virginia is regulating a subject matter the AEA quite conspicuously leaves to the States.

Although Congress is well aware of the potentially significant health, environmental, and economic effects of uranium mining—and of the national interests that might be served by asserting federal authority even over this traditional state area—it has chosen to leave to state and local governments the regulation of conventional uranium mining on private land. Congress could regulate uranium mining by displacing state law broadly, or, as with SMCRA, by imposing preemptive minimum standards, leaving States free to regulate more stringently. But Congress has chosen to do neither of these things, opting instead for a regime under which the NRC can permit mining on federal land and can obtain uranium deposits on nonfederal land by contract or condemnation, whenever the responsible federal agency deems such actions necessary to effectuate the Act's purposes. Honoring Congress's considered choice in the AEA means rejecting petitioners' preemption claims here.

Petitioners' "obstacle" preemption theory (Pet. Br. 54-59) also lacks merit. Congress was aware that leaving mining regulation to the States would necessarily bear upon the availability, timing, and cost of uranium that might otherwise be mined from nonfederal lands. The decision not to preempt state law, even as Congress preempted state regulation of other aspects of the production cycle, was a deliberate decision to uphold States' traditional authority despite those costs. The AEA's provision for bringing real property containing uranium deposits into federal ownership "to the extent [the NRC] deems necessary to effectuate" the AEA's purposes, 42 U.S.C. § 2096(b), as well as its provision for the NRC to administer mining on federal land when the federal agency "deems" it necessary to effectuate the AEA's purposes, *id.* § 2097, together ensure that leaving state authority in place will not unduly impede those purposes. The AEA does not establish a rule that States must allow any activity that conceivably advances nuclear power generation: To the contrary, Congress obviously recognized that the States' exercise of the authority over the areas left to them under the Act could have implications for particular nuclear projects, even the construction of a nuclear power plant. *See Pacific Gas*, 461 U.S. at 216 (finding retained authority "easily sufficient to permit a state so inclined to halt the construction of new nuclear plants by refusing on economic grounds to issue certificates of public convenience in individual proceedings").

* * * *

The vitality of our system of federalism depends just as much on honoring Congress's choices not to

displace state law as it does on striking down acts of Congress that interfere with state prerogatives. *Cf. Bond v. United States*, 134 S. Ct. 2077, 2090-93 (2014). Here, Congress's choice not to interfere with States' authority to regulate conventional uranium mining on nonfederal land could hardly be more clear. The AEA establishes an elaborate regime addressing various phases of the process of producing nuclear energy after uranium has been removed from its place of deposit, and it provides means for the federal government to facilitate development of source materials when the responsible federal agency deems necessary it to effectuate the Act's purposes. But the Act does not limit States' longstanding authority to regulate the mining of uranium on nonfederal land. Petitioners' strained efforts to disturb that judgment should be rejected.

CONCLUSION

The Fourth Circuit's judgment should be affirmed.

Respectfully submitted,

MARK SABATH
WILLIAM C. CLEVELAND
Southern
Environmental
Law Center
201 West Main Street
Suite 14
Charlottesville, VA
22902
(434) 977-4090

SEAN H. DONAHUE*
MATTHEW LITTLETON
DAVID T. GOLDBERG
Donahue, Goldberg,
& Weaver, LLP
1111 14th St., NW
Suite 510A
Washington, DC 20005
(202) 277-7085
sean@donahuegoldberg.com
*Counsel of Record

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